

NOVEMBER 1996

IDAHO HABITAT/NATURAL PRODUCTION MONITORING

Part 1

Annual Report 1995



BONNEVILLE
POWER ADMINISTRATION



This report was funded by the Bonneville Power Administration (BPA), U.S. Department of Energy, as part of BPA's program to protect, mitigate, and enhance fish and wildlife affected by the development and operation of hydroelectric facilities on the Columbia River and its tributaries. The views in this report are the author's and do not necessarily represent the views of BPA.

For additional copies of this report, write to:

Bonneville Power Administration
Public Information Center - CKPS-1
P.O. Box 3621
Portland, OR 97208

Please include title, author, and DOE/BP number from the back cover in the request.

IDAHO HABITAT/NATURAL PRODUCTION MONITORING
PART I

ANNUAL REPORT 1995

Prepared by:

J. A. Hall-Griswold
Fisheries Research Biologist
Idaho Department of Fish and Game
Stanley, ID

and

C. E. Petrosky
Fisheries Staff Biologist
Idaho Department of Fish and Game
Boise, ID

Prepared for:

U. S. Department of Energy
Bonneville Power Administration
Environment, Fish and Wildlife
P.O. Box 3621
Portland, OR 97283-3621

IDFG 97-4
Project Number 91-73
Contract Number DE-B179-91BP21182

NOVEMBER 1996

TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT.....	1
INTRODUCTION	2
METHODS	2
Prioritizations of Streams	4
Physical Habitat	6
Parr Density Monitoring	7
Parr Density Comparisons	8
Database Management	9
RESULTS AND DISCUSSION	12
Parr Density Monitoring	12
Steelhead Trout Parr.....	12
Densities.....	12
Percent Carrying Capacity	17
Chinook Salmon Parr	17
Densities	17
Percent Carrying Capacity	21
Future Direction and Recommendations	21
ACKNOWLEDGMENTS	27
LITERATURE CITED.....	28

LIST OF TABLES

Table 1.	Number of sections where steelhead trout and chinook salmon parr were monitored in Idaho by BPA project 91-73, other research and management programs, as well as other agencies and tribes from 1984 through 1995	5
Table 2.	Average percent carrying capacity (PCC) for ages 1+ and 2+ steelhead trout in all monitoring sections (B and C channels) and densities (number/100 m ²) of age 1+ steelhead trout parr in B channels, 1995	13

LIST OF TABLES (Cont.)

	<u>Page</u>
Table 3. Average percent carrying capacity (PCC) for chinook part in all monitoring sections (B and C channels) and densities (number/100 m ²) of chinook salmon parr in C channels, 1995	14
Table 4. Mean percent of rated carrying capacity (PCC) of age 1+ and age 2+ steelhead trout parr in B and C channels, and density of age 1+ steelhead trout part in B channels, by class and year, 1985-1995	16
Table 5. Mean percent of rated carrying capacity (PCC) of age 0+ chinook salmon part in B and C channels, and density of age 0+ chinook salmon parr in C channels, by class and year, 1985-1995	19
Table 6. Summary of length at age information for steelhead trout by drainage	23
Table 7. Breakdown of 1995 GPM sampling by classes of anadromous fish and channel type	25

LIST OF FIGURES

Figure 1. Idaho's present anadromous fish production waters showing major drainages of the Clearwater River, Salmon River, and Snake River subbasins	3
Figure 2. Present distribution of wild A-run and B-run steelhead trout production areas in Idaho	10
Figure 3. Present distribution of wild chinook salmon production areas in Idaho	11
Figure 4. Mean annual density (number of age 1 ⁺ steelhead trout/ 100 m ² in B channels) of four classes of steelhead trout part in Idaho, 1985-1995	15
Figure 5. Mean annual percent of carrying capacity of four classes of steelhead trout parr (age 1 ⁺ and 2 ⁺ in B and C channels in Idaho, 1985-1995	18
Figure 6. Mean annual density (number/100 m ² in C channels) of two classes of chinook salmon part (age 0+) in Idaho, 1985-1995	20
Figure 7. Mean annual percent of carrying capacity of two classes of chinook salmon part (age 0+ in B and C channels) in Idaho, 1985-1995	22

LIST OF APPENDICES

	<u>Page</u>
Appendix A-1. General parr monitoring snorkel survey sections for project 91-73	32
Appendix A-2. Evaluation snorkel sections - 1995	40
Appendix A-3. General, parr monitoring sections unsurveyed in 1995	45
Appendix B. Prioritization of snorkel streams	53
Appendix C-1. Biological data collection sheet for general parr monitoring - 1995	61
Appendix C-2. Biological data collection sheet by habitat unit used by Intensive Smolt Sampling (ISS) Programs	63
Appendix C-3. Physical habitat data collection sheet for general parr monitoring	65
Appendix D. General parr monitoring database structure (version 1.1)	67

ABSTRACT

A total of 281 stream sections were sampled in 1995 to monitor trends in spring and summer chinook salmon *Oncorhynchus tshawytscha* and steelhead trout *O. mykiss* parr populations in Idaho. Percent carrying capacity and density estimates were summarized for 1985-1995 by different classes of fish: wild A-run steelhead trout, wild B-run steelhead trout, natural A-run steelhead trout, natural B-run steelhead trout, wild spring and summer chinook salmon, and natural spring and summer chinook salmon. The 1995 data were also summarized by subbasins as defined in Idaho Department of Fish and Game's 1992-1996 Anadromous Fish Management Plan.

Snake River steelhead trout are currently being considered for listing as "threatened" under the Endangered Species Act. Chinook salmon were listed as "threatened" in 1992, and reclassified as "endangered" in 1994 on an emergency basis. Parr density monitoring indicated that Idaho steelhead trout and chinook salmon populations remained at critically low levels in 1995, with chinook salmon parr populations taking a dramatic plunge. Estimates of densities patterned those of percent carrying capacity for all classes of steelhead trout and chinook salmon. Percent carrying capacity and densities of natural and wild spring and summer chinook salmon dropped to the lowest levels on record in 1995. Out of the last five years (the length of the chinook life cycle) only one year class showed even moderate strength (1993 brood year or 1994 parr). Densities and percent carrying capacity for all classes of steelhead trout were at similar levels in 1995 compared to 1994, and were less than the 1985-1995 average.

Authors:

J.A. Hall-Griswold
Fisheries Research Biologist.

C. E. Petrosky
Fisheries Staff Biologist

INTRODUCTION

The Idaho Department of Fish and Game (IDFG) has been monitoring trends in juvenile spring and summer chinook salmon *Oncorhynchus tshawytscha* and steelhead trout *O. mykiss* populations in the Salmon, Clearwater, and lower Snake River drainages (Figure 1) for the past 12 years. The IDFG monitoring approach, developed in 1984-85 (Petrosky and Holubetz 1985, 1986), consists of three basic integrated levels: 1) parr density monitoring; 2) parr standing stock evaluations; and 3) estimation of survival rates between major freshwater life stages (egg, parr, smolt) of chinook salmon and steelhead trout. The latter two are referred to as "intensive studies." Annual general monitoring of anadromous fish densities is being used to follow population trends and define seeding levels over a broad geographic area, but generally with a small number of sections per stream. Intensive studies (Kiefer and Lockhart 1994) estimate spawning escapements, standing stocks of parr, and outmigrant yields for a limited number of streams. These estimates are used to index survival rates from egg-to-parr and parr-to-smolt.

Project 91-73, Idaho Natural Production Monitoring, consists of two subprojects; General Monitoring and Intensive Monitoring. This report updates and summarizes data through 1995 for the General Parr Monitoring (GPM) database to document status and trends of classes of wild and natural chinook salmon and steelhead trout populations (Objective 1, General Monitoring Subproject). Estimates of densities and percent carrying capacities were compared between wild and natural populations of both juvenile chinook salmon and juvenile steelhead trout. A stream prioritization plan developed in 1994, which prioritizes streams in each management unit to ensure continued sampling of "core" streams, was followed in 1995.

Snake River steelhead trout are being considered in 1996 for listing as "threatened" under the Endangered Species Act (ESA). Snake River spring/summer chinook salmon were listed as "threatened" in 1992, and reclassified as "endangered" in August 1994 on an emergency basis. The ESA listing for spring/summer chinook pertains to native salmon populations in the Salmon River, Idaho, and Snake River tributaries in Oregon, Washington, and Idaho; the reintroduced populations in the Clearwater River, Idaho, are not listed.

METHODS

This project has been monitoring parr densities of juvenile chinook salmon and steelhead trout as well as densities of resident species in stream sections within the Salmon, Clearwater, and lower Snake River drainages in Idaho since 1984. Only data from 1985 on are presented in this report because of the small number of stream sections sampled in 1984 (the initial year of the project). The IDFG Fisheries Research Section and regional anadromous fisheries programs in the Clearwater, Salmon, and Southwest regions were responsible for collecting the majority of the 1995 data. Other cooperating agencies involved in the collection of parr density data for this project are the Shoshone-Bannock Tribes (SBT), the Nez Perce Tribe (NPT), and

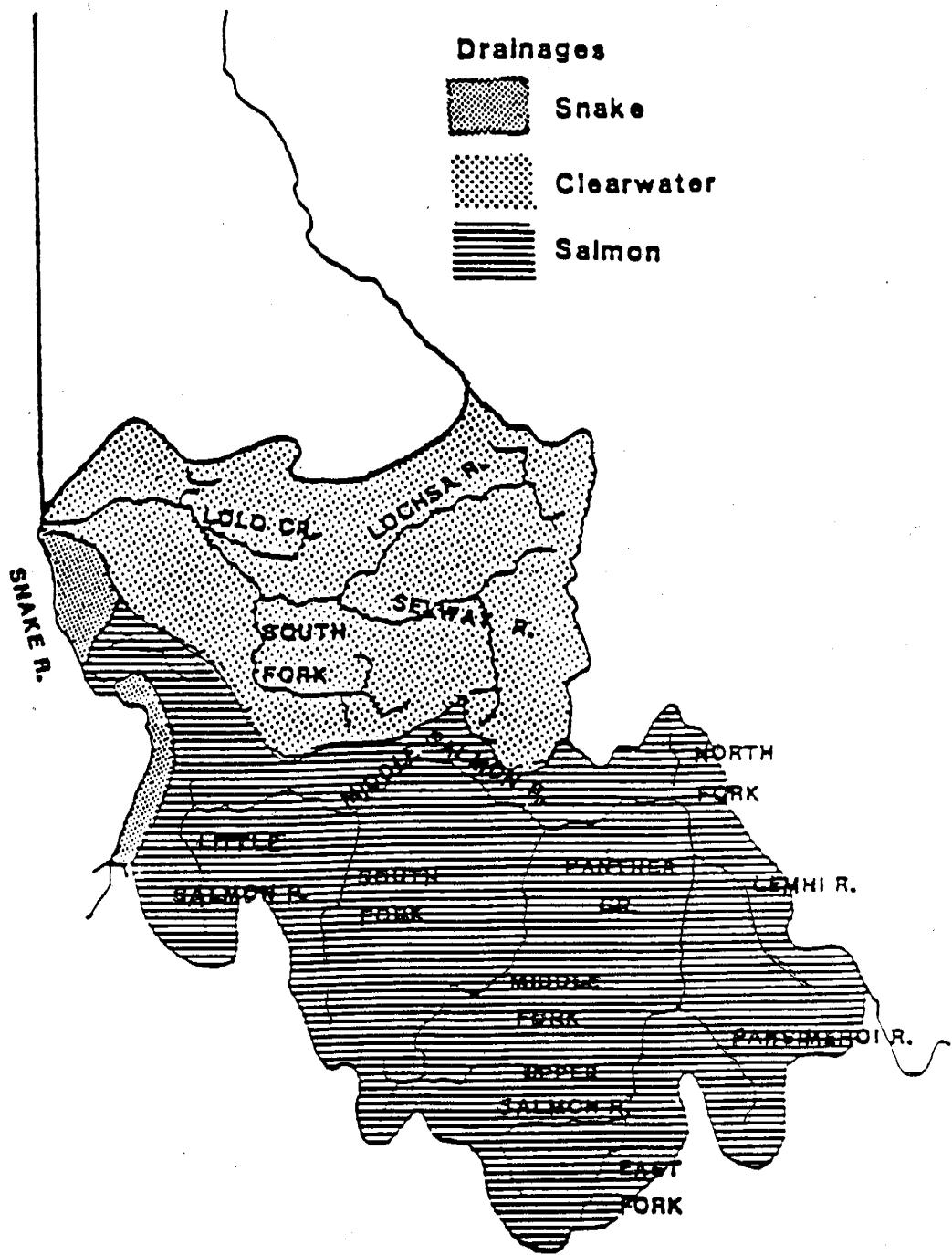


Figure 1. Idaho's present anadromous fish production waters showing major drainages of the Clearwater River, Salmon River, and Snake River subbasins.

the U.S. Fish and Wildlife Services' Fishery Resource Office (FRO) in Ahsahka, Idaho. The number of sections monitored annually since 1984 is shown in Table 1.

Prioritization of Streams

To ensure the long-term integrity of monitoring trends in anadromous fish populations, a sampling scheme to prioritize streams for conducting snorkel surveys (Appendix B) was developed in 1994 (Leitzinger and Holubetz 1994). Priority one streams are top priority and must be surveyed every year. These represent the most important (core) streams that ensure all subbasins, as defined in the IDFG Anadromous Plan (IDFG 1992), will be sampled. Priority one streams do not require intensive sampling, but they do need to be stratified by channel type (B or C), and several representative sites (at least 3) per strata need to be identified and sampled every year. These sites should include several habitat types per site, with fish numbers and surface areas recorded separately for each habitat type.

Priority two streams are considered non-key streams which are sampled intensively. Sampling of priority two streams should occur annually (or as long as the project continues). These streams represent streams currently being sampled intensively by various research and management projects. Once the project ends, the streams will be evaluated to determine if they should be categorized as priority one, three, or four.

Priority three streams are non-key streams sampled with general parr monitoring sites only, and will be surveyed only as time allows (every other year or a minimum of every third year). These are important production streams but do not require annual sampling.

Nonessential streams are ranked a priority four. These are streams either not rated as chinook (and in some cases, steelhead) spawning and rearing streams or are not significant anadromous fish production streams. Priority four streams should be sampled as needed for regional or resident fish management or research needs.

A breakdown of key monitoring (or priority one) anadromous streams sampled annually by cooperating agencies, tribes, and regions are as follows:

IDFG Research	=	11
Clearwater Region	=	10
Southwest Region	=	5
Salmon Region	=	4
NPT	=	5
SBT	=	3
USFWS-FRO	=	1
<hr/>		
Total Key Streams	=	39

Table 1. Number of sections where steelhead trout and chinook salmon parr were monitored in Idaho by BPA project 91-73, other research and management programs, as well as other agencies and tribes from 1984 through 1995.

Year	Number of steelhead trout sections	Number of chinook salmon sections ^a
1984	60	37
1985	184	139
1986	190	156
1987	225	178
1988	225	175
1989	268	216
1990	349	243
1991	315	241
1992	334	241
1993	401	377
1994	333	329
1995	281	272

^aChinook salmon sections are a subset of the steelhead trout sections.

Physical Habitat

General parr monitoring sections provide an annual index of anadromous fish abundance in various habitat types and drainages. Monitoring sections are approximately 100 m in length with boundaries occurring at defined breaks between habitat types. Sections generally include at least one pool-riffle sequence. Stream strata and sections were cross-referenced to the Environmental Protection Agency's (EPA) stream reach numbering system (NPPC and BPA 1989). Data from individual sections monitored in 1995 are listed in Appendix A-1.

Physical habitat variables were standardized and measured at least once since 1984 in each established density monitoring section. The physical habitat variables other than width and length were not measured every year in each section due to time constraints (parr densities in all anadromous streams in Idaho need to be sampled within a 2-month period from late June to late August) and because the physical habitat was relatively stable from year to year. The same physical variables were measured in the IDFG supplementation and intensive smolt monitoring projects. Parr density evaluation sites which were surveyed in 1995 are listed in Appendix A-2. IDFG has encouraged other agencies and tribes to incorporate this standardized variable list into their monitoring programs. GPM sites not surveyed in 1995 are listed in Appendix A-3. Several factors such as low flows, lack of personnel, and stream prioritization contributed to a higher number than usual of unsurveyed stream sections in 1994 and 1995.

The following physical habitat variables were measured in each monitoring section: habitat type (percent pool, riffle, run, pocketwater, and glide); substrate composition (percent surface sand, gravel, rubble, boulder, and bedrock); section length, average width, average depth, gradient, conductivity, and channel type (Rosgen 1985). The techniques to collect the physical habitat data are described in Petrosky and Holubetz (1988) and Scully et al. (1990).

Data collected during 1985-1995 were summarized by channel type. This variable simultaneously categorizes several morphological characteristics and was used as a primary classifier to investigate juvenile chinook salmon and steelhead trout rearing potential and for density trend comparisons. Scully and Petrosky (1991) demonstrated the effect of channel type on both steelhead trout and chinook salmon parr densities. A comparison of parr densities in B and C channels showed that chinook salmon densities were 3.5 times higher in C channels, while steelhead trout densities were 2 to 3 times higher in B channels. B channels are confined in valleys or canyons and have high enough gradient that most of the fine sediment is flushed out. A significant part of the substrate may be comprised of boulders larger than 30 cm in diameter. C channels, in contrast, meander through flat alluvial valleys and are characterized by deposition of fine materials and low water velocities. Substrate composition in C channels has a high percentage of small materials, sand, and gravel. In unstable, heavily managed watersheds, sand may be the predominant substrate type in C channels. In general, surveyed C channel sections had gradients less than 1.5%, while B channel sections had gradients greater than 1.5%.

Parr Density Monitoring

General parr monitoring and intensive monitoring subprojects sampled a total of 281 sections in 1995 to index the annual abundance of chinook salmon and steelhead trout parr (Table 1). Chinook salmon parr are defined here as age 0+, with lengths less than 10 cm (4 in). Steelhead trout parr are age 1+ and 2+, with respective lengths of 8-15 cm (3.0-5.9 in) and 15-23 cm (6.0-8.9 in). Steelhead trout length-at-age intervals are similar to those defined by Thurow (1985, 1987). These data were used to index trends in annual abundance and estimate rearing potential in different habitats.

Most anadromous fish production streams in Idaho are clear and have low conductivity. Snorkel counts by trained observers are preferred for efficiency in these streams over estimates obtained from electrofishing. Snorkel counts potentially underestimate parr abundance, especially at lower temperatures in late summer and fall (Hillman et al. 1993). Other comparisons of snorkeling and electrofishing methods did not indicate a negative bias (Petrosky and Holubetz 1987; Hankin and Reeves 1988). Density estimates in 1995 were obtained by snorkeling in all anadromous stream sections except those in the Lemhi River. The Lemhi River was electrofished due to its relative turbidity and high conductivity. This report summarizes 1995 parr density and percent carrying capacity (PCC) information. Data for years prior to 1995 were obtained from Rich et al. (1992 and 1993), Rich and Petrosky (1994), Leitzinger and Petrosky (in print), and Hall-Griswold et al. (in print). Snorkel methods for surveying fish are described in Petrosky and Holubetz (1986). Data sheets used for recording snorkel data appear in Appendices C-1 and C-2. Data for physical habitat are recorded on the form shown in Appendix C-3.

All monitoring sections were snorkeled with a team of divers working upstream. Crew size ranged from one for small streams to five or more for larger streams. The combined programs monitored sections in 72 streams (39 of which were priority streams), representing a variety of stocks, production types (i.e., wild or natural), and habitats. We compared parr densities among all major anadromous fish drainages in Idaho during 1985-1995, and summarized chinook salmon and steelhead trout parr densities by year and production type. Due to the preference by steelhead trout for B channels and chinook salmon for C channels, parr density comparisons among drainages incorporated only the preferred channel type for each species. We summarized A-run and B-run steelhead trout separately because of large differences in Columbia River harvest rates and escapements between the two runs (TAC 1991).

We also estimated parr density as a PCC derived from standardized smolt capacity ratings developed for subbasin planning by the System Planning Group for the Northwest Power Planning Council (NPPC 1986). The parr density database was merged with the NPPC's species presence/absence database using the common variable EPA reach number. The NPPC file rates each reach as being poor, fair, good, or excellent habitat for rearing chinook salmon or steelhead trout smolts. Respective NPPC smolt densities in number/100 m² are 10, 37, 64, and 90 for chinook salmon, and 3, 5, 7, and 10 for steelhead trout. The NPPC smolt density ratings

provide a consistent, though subjective assessment of habitat quality and smolt carrying capacity within Idaho subbasins. Based on parr densities from this project and a planning value of 50% parr-to-smolt survival or less (Kiefer and Lockhart 1994), the NPPC smolt densities appear to be good approximations for steelhead trout, but over estimate carrying capacity for chinook salmon in Idaho streams. NPPC steelhead trout smolt capacity in excellent habitat ($10/100\text{ m}^2$) and 50% parr-to-smolt survival imply a parr density of $20/100\text{ m}^2$, the same as defined by Petrosky and Holubetz (1988) based on empirical data. NPPC chinook salmon smolt carrying capacity in excellent habitat ($90/100\text{ m}^2$) and 50% parr-to-smolt survival imply a parr density of $180/100\text{ m}^2$, which is 67% higher than defined by Petrosky and Holubetz (1988) based on empirical data and fry stocking experiments.

We adjusted the NPPC smolt density ratings to parr carrying capacity assuming that excellent steelhead trout habitat would support 20 parr/ 100 m^2 and excellent chinook salmon habitat would support 108 parr/ 100 m^2 (Petrosky and Holubetz 1988). We also assumed the same relative density proportions between the NPPC habitat classes of poor, fair, good, and excellent. Thus, respective parr carrying capacity ratings for four habitat classes were 6, 10, 14, and $20/100\text{ m}^2$ for steelhead trout and 12, 44, 77, and $108/100\text{ m}^2$ for chinook salmon.

Excellent habitat for chinook salmon would be undisturbed C channel streams and good habitat would be undisturbed B channel streams with moderate gradients. High gradient undisturbed B channels would rate as fair or poor for chinook salmon (Petrosky and Holubetz 1988). For steelhead trout, excellent habitat would be in undisturbed B channels, and good habitat would be in undisturbed C channels. C channels in productive spring-fed streams could also be classified as excellent steelhead trout rearing habitat. Degraded streams received ratings of good, fair, or poor for both species depending on the degree of disturbance and channel type. Because the different habitat types and quality ratings are considered in the carrying capacity rating system, PCC data from both B and C channel sections are analyzed for both species, unlike the analysis for the parr density statistic.

Parr Density Comparisons

Steelhead trout and chinook salmon cells were defined to be consistent with stocks or subbasins identified in IDFG's Anadromous Fish Management Plan (IDFG 1992) and the subbasin plans (IDFG et al. 1990; Nez Perce Tribe and IDFG 1990; Washington Department of Fisheries et al. 1990; Leitzinger and Petrosky, in print; and Hall-Griswold et al., in print). Densities and PCC for 1995 were summarized according to these cells.

We compared steelhead trout and chinook salmon parr densities and PCC among classes and years for 1985-1995. Steelhead trout classes were wild A-run, wild B-run, natural A-run, and natural B-run. Chinook salmon classes were wild and natural. In order to increase sample size, spring chinook and summer chinook were combined.

Wild (indigenous) steelhead trout populations in Idaho presently occur in the lower tributaries of the Clearwater (below the North Fork Clearwater River) and Selway rivers; in the majority of small Snake River tributaries; the entire Middle Fork and South Fork Salmon rivers; most small mainstem Salmon River tributaries downstream from the mouth of the Middle Fork Salmon; and in Rapid River, a tributary to the Little Salmon River (Figure 2). Areas not listed above were considered for this analysis to have natural (hatchery-influenced) populations. The classifications in this report will be revised as needed for consistency with the proposed ESA steelhead listing. In particular, Lochsa River steelhead may be classified as wild, rather than natural populations.

Wild spring chinook salmon in Idaho presently occur throughout the Middle Fork Salmon River drainage and several Salmon River tributaries below the Middle Fork Salmon River. Wild summer chinook salmon occur in the Secesh River, the Middle Fork Salmon River drainage, Rapid River, the upper mainstem Salmon River and tributaries including lower Valley Creek and the lower East Fork Salmon River (Figure 3). The remainder of Idaho's chinook salmon waters were classified here as natural populations. Due to the small sample size of summer chinook, we combined spring and summer chinook salmon and compared only wild and natural classes.

For steelhead trout, the statistic PCC used the density of age 1⁺ and age 2⁺ steelhead trout parr relative to maximum density that could occur in that section. The PCC may be the most appropriate statistic for comparing the relative status of steelhead trout populations because it incorporates an estimate of the carrying capacity, and is insensitive to assumptions about length at age. The PCC statistic also accounts for, in part, differences in channel type, gradient, stream size, and sediment level. Because the PCC for steelhead trout includes both age 1⁺ and age 2⁺ parr, it may mask annual differences resulting from variations in adult escapement between two brood years.

The best index of steelhead trout escapement is probably the age 1⁺ parr density in B channels. In underseeded conditions, as occur in most of Idaho's anadromous fish waters, sufficient B channel habitat exists to support the age 1⁺ steelhead trout parr. Fewer fish are forced into the less preferred C channel habitat as a result. Also, unlike the age 2⁺ parr, none of the age 1⁺ cohort would have smolted. However, refinement of the GPM length-at-age classification appears to be necessary to better represent yearling abundance across the range of production streams (see Future Direction and Recommendations)

For chinook salmon, both parr density and PCC are for a single age class (age 0⁺) and brood year. Thus, the best overall index may be PCC rather than density in C channels because PCC has a larger sample size, incorporating both B and C channel sections. At extremely low escapements, relatively fewer chinook salmon parr and a smaller PCC would be expected in the less preferred B channel habitat.

Database Management

All biological data from 1985 through 1995 have been entered into dBASE III (version 1.5) files for easy access and arrangement for various analyses. The 1986 through 1995 data

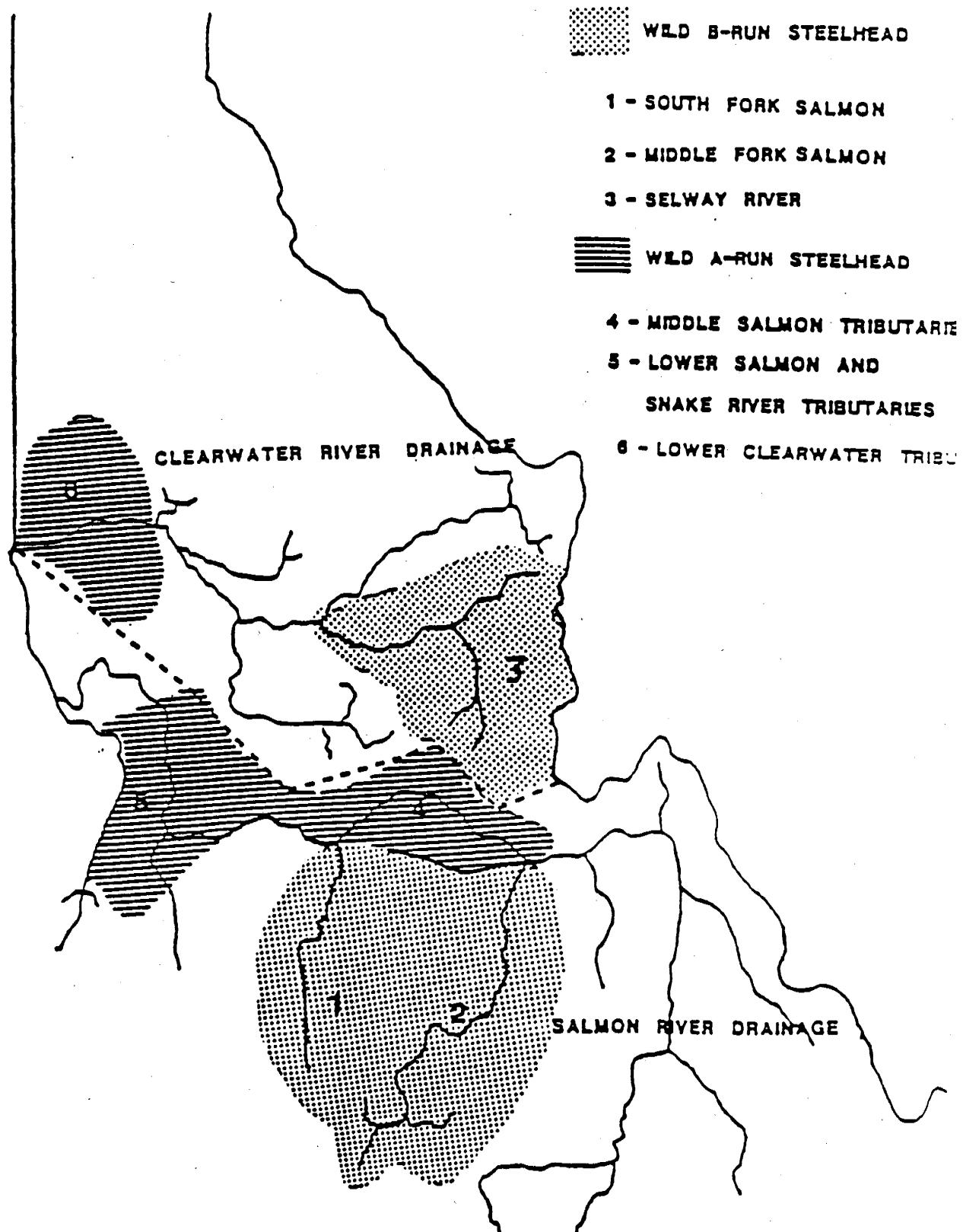


Figure 2. Present distribution of wild A-run and B-run steelhead trout production areas in Idaho.

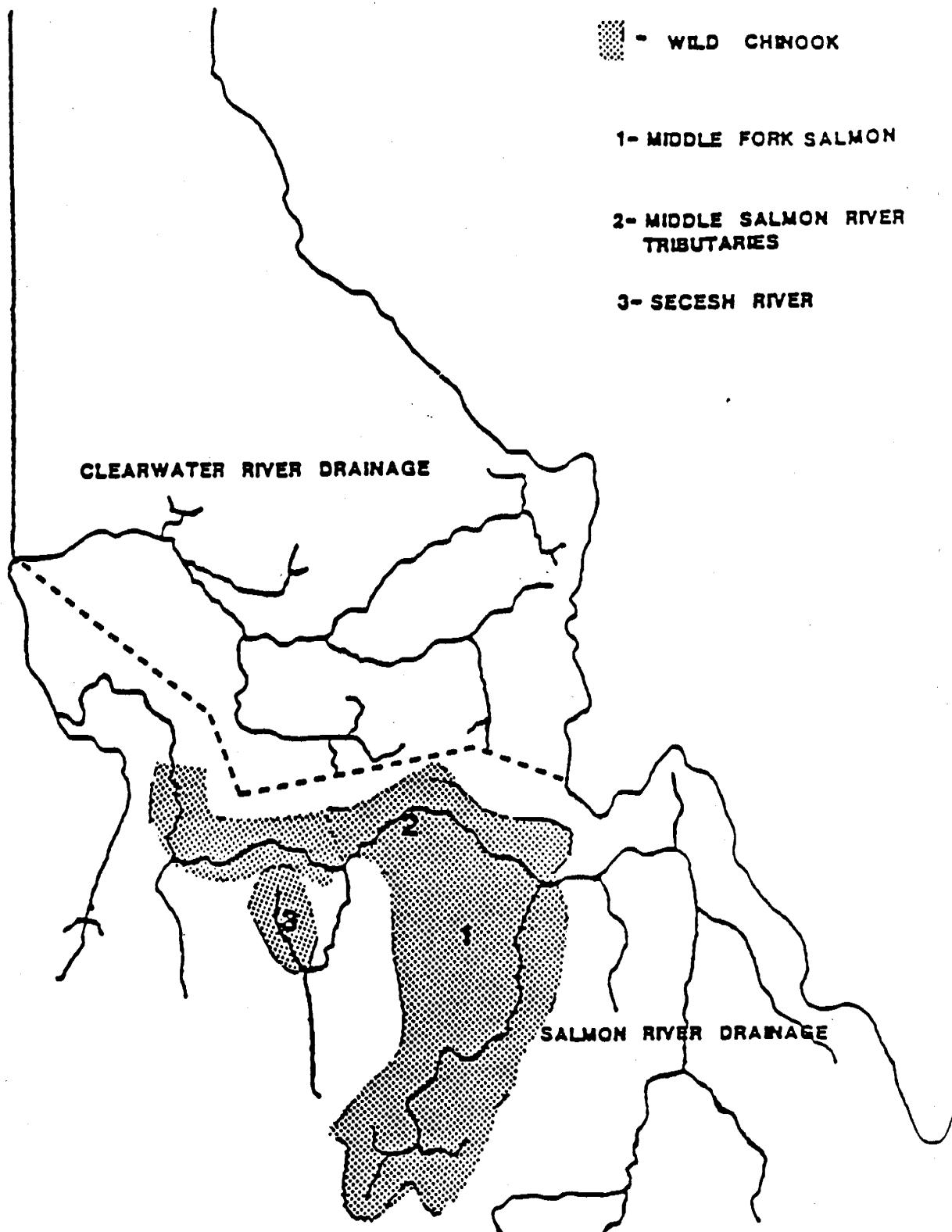


Figure 3. Present distribution of wild chinook salmon production areas in Idaho.

have been verified for accuracy. The 1985 data are the last to be verified. Once verified, these files are available for use by project implementors, tribes, and natural resource agencies upon request. The GPM database structure (version 1.1) is listed in Appendix D.

RESULTS AND DISCUSSION

Parr Density Monitoring

Numbers of streams and sections sampled in 1995 within each class and cell, and average PCC and densities are summarized in Tables 2 and 3. All general parr monitoring stream sections surveyed in 1995 are listed in Appendix A-1 along with channel type, chinook salmon and steelhead trout class, chinook salmon and steelhead trout density, and percent carrying capacity.

Steelhead Trout Parr

Steelhead trout populations have generally not met replacement since the mid-1980s, as evidenced by the aggregate declines in parr densities from the mid-1980s to 1995 (Figure 4, Table 4). Yearling parr counted in 1995 were from the 1994 brood year, which were primarily progeny of brood years 1988-1990 (assuming predominate smolt ages of 2⁺ and 3⁺, and ocean ages of 1 and 2). Depending on run type, population, and geographic area, lags of four to six years may be most appropriate to determine whether replacement is being met from yearling parr density indices for specific drainages.

Densities-Table 4 and Figure 4 summarize the density of age 1⁺ steelhead trout parr in B channels, by class and year (1985-95). Densities of age 1⁺ steelhead trout parr in B channels are listed in Table 2 by class and cell (or subbasin). The lowest mean densities for age 1⁺ steelhead trout parr in B channels in 1995 were for natural A-run steelhead in the Lemhi River (cell 12) and upper Salmon River (cell 10) at 0.06/100 m² and 0.09/100 m², respectively (Table 2). The highest mean densities were for wild A-run steelhead trout in the lower Salmon River tributaries (cell 18) at 11.65/100 m². The next to highest densities were also for wild A-run steelhead trout in Snake River tributaries (cell 16) at 6.43/100 m². Overall, densities for all classes of age 1⁺ wild A-run and natural B-run steelhead trout parr may have increased slightly over 1994 densities, while natural A-run and wild B-run may have decreased from 1994 levels (Table 4, Figure 4).

Table 2. Average percent carrying capacity (PCC) for ages 1⁺ and 2⁺ steelhead trout in all monitoring sections (B and C channels) and densities (number/100m²) of age 1⁺ steelhead trout parr in B channels, 1995.

Class Cell	Average PCC	# Sites	# Streams	Average age 1 ⁺ density in B channels	# Sites	# Streams
<u>Wild B-run</u>						
1. Selway R.	21.10	27	13	2.37	26	13
2. Middle Fk Salmon R.	3.02	28	8	0.87	10	7
3. South Fk Salmon R.	5.48	26	9	0.98	12	5
<u>Natural B-run</u>						
4. Lochsa R.	32.95	18	8	4.10	16	7
5. South Fk Clearwater R.	24.57	52	7	3.38	25	5
6. Mainstem Clearwater & Tribs (Lolo Cr.)	5.48	10	2	0.54	6	2
7. East Fork Salmon R. (Above weir)	2.54	4	1	0.40	3	1
<u>Natural A-run</u>						
8. Little Salmon R.	32.07	3	1	4.67	3	1
9. Lower Salmon R.	20.75	4	1	2.63	4	1
10. Upper Salmon R.	9.07	11	3	0.09	5	3
11. Pahsimeroi R.	No sites sampled	0	0	No sites sampled	0	0
12. Lemhi R.	39.60	4	2	0.06	2	1
13. Headwaters Salmon R.	1.73	72	11	0.37	32	9
14. Snake R. Tribs (Granite Cr.)	57.50	2	1	6.40	2	1
<u>Wild A-run</u>						
15. Salmon Canyon Tribs	25.09	6	3	2.08	4	3
16. Snake R. Tribs (Sheep Cr)	49.67	2	1	6.43	2	1
17. Mainstem Clearwater R. Tribs	34.60	3	2	3.28	3	2
18. Lower Salmon R. Tribs	61.80	2	2	11.65	2	2
19. Rapid R. (above weir)	37.93	7	2	5.03	7	2

Table 3. Average percent carrying capacity (PCC) for chinook parr in all monitoring sections (B and C channels) and densities (number/100m²) of chinook salmon parr in C channels, 1995.

Class Cell	Average PCC	# Sites	# Streams	Average age 0+ density in C channels	# Sites	# Streams
Wild Spring						
1. Middle Fk Salmon R. (w/o Bear Valley/Elk Cr)	0.46	17	6	0.31	9	4
2. Salmon R Canyon & Tribs (Chamberlain Cr)	1.62	6	3	0.00	2	2
3. Bear Valley/Elk Cr.	0.07	7	1	0.06	6	1
4. Snake R. Tribs (Granite/Sheep Cr)	0.00	4	2	No C-channel	--	--
19. Lower Salmon R.	0.32	6	3	No sites sampled	--	--
Wild Summer						
5. Secesh R.	0.21	7	3	0.23	5	2
6. Middle Fk Salmon R.	0.00	4	1	0.00	3	1
7. Upper Salmon R. (Middle Fk to Redfish Lk Cr and East Fk mouth to weir)	0.12	2	1	No sites sampled	--	--
Natural Spring						
8. Little Salmon R.	0.08	3	1	No C-channel	--	--
9. Lemhi R.	0.90	4	2	0.00	1	1
10. Upper Salmon R.	0.40	13	3	0.00	7	3
11. Headwaters Salmon R.	4.47	72	11	4.05	40	7
12. South Fk Clearwater R.	2.60 ^a	52	8	0.41	27	6
13. Lochsa R.	0.08	18	8	0.00	2	1
14. Selway R.	0.44	27	13	4.05	1	1
15. Mainstem Clearwater R. & Tribs (Lolo Cr.)	0.08	13	4	0.00	4	2
Natural Summer						
16. Rapid R.	0.42	7	2	No C-channel	--	--
17. South Fk Salmon R.	2.97	19	6	0.67	9	4
18. Pahsimeroi R.	No sites sampled	--	--	No sites sampled	--	--

^aIncludes the ponds on Crooked River

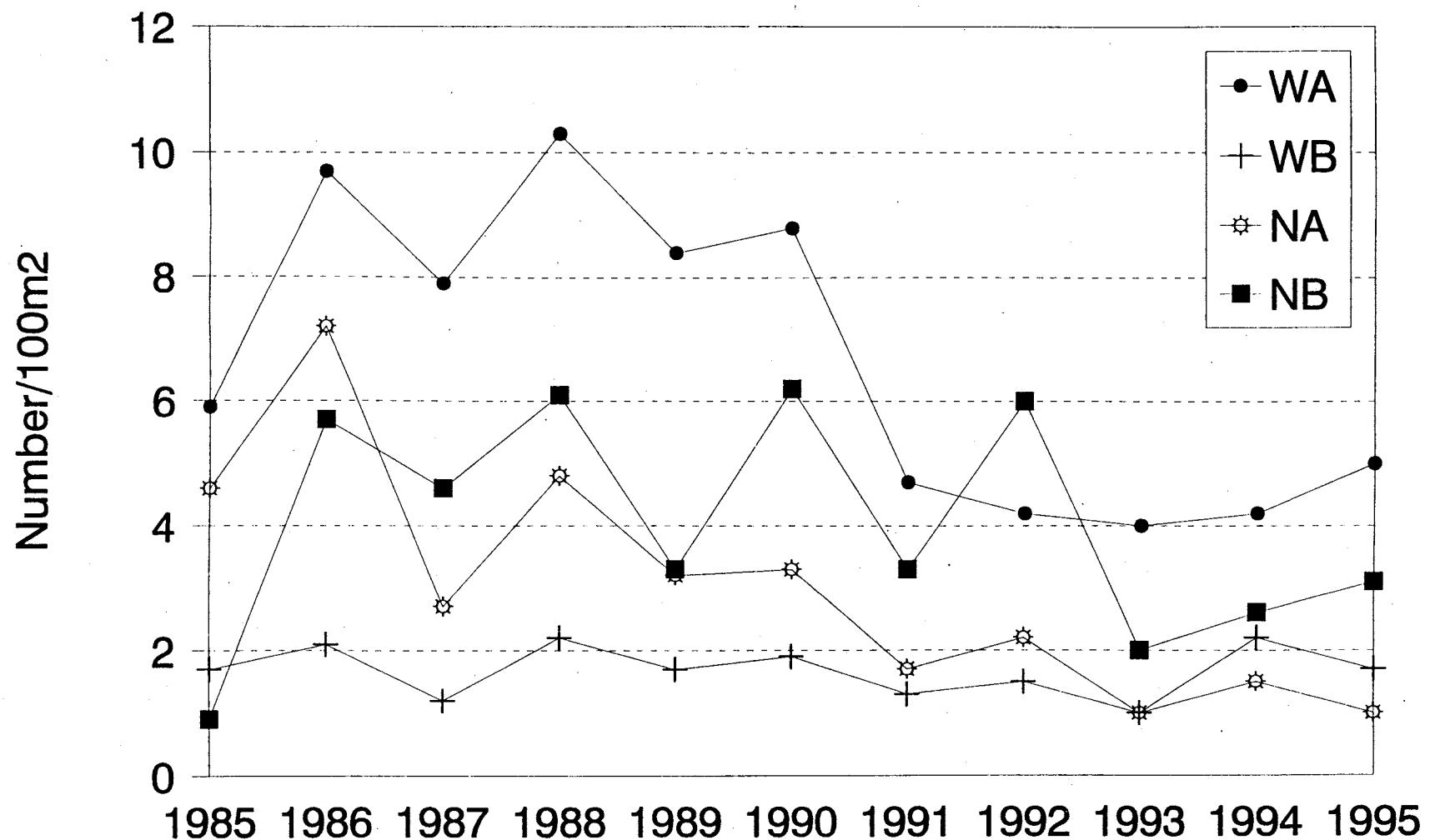


Figure 4. Mean annual density (number of age 1+ steelhead trout/100 m² in B channels) of four classes of steelhead trout parr in Idaho, 1985-1995.

Table 4. Mean percent of rated carrying capacity (PCC) of age 1⁺ and age 2⁺ steelhead trout parr in B and C channels, and density of age 1⁺ steelhead trout parr in B channels, by class and year, 1985-1995.

Year	PCC (by Class ^a)				B channel density (by Class)			
	WA	WB	NA	NB	WA	WB	NA	NB
1985	71	9	30	13	5.9	1.7	4.6	0.9
1986	85	14	38	51	9.7	2.1	7.2	5.7
1987	76	10	24	46	7.9	1.2	2.7	4.6
1988	81	15	26	43	10.3	2.2	4.8	6.1
1989	64	11	22	27	8.4	1.7	3.2	3.3
1990	67	16	20	36	8.8	1.9	3.3	6.2
1991	45	9	11	33	4.7	1.3	1.7	3.3
1992	37	9	14	43	4.2	1.5	2.2	6.0
1993	33	8	9	16	4.0	1.0	1.0	2.0
1994	37	13	13	21	4.2	2.2	1.5	2.6
1995	37	10	7	23	5.0	1.7	1.0	3.1
Mean	57.5	11.3	19.5	32.0	6.6	1.7	3.0	4.0
SD of Annual Means	20.0	2.8	9.7	12.9	2.4	0.4	1.9	1.8

^aWA=wild A, WB=wild B, NA=natural A, NB=natural B

Percent Carrying Capacity-While PCC for age 1⁺ and 2⁺ wild A-run and natural B-run steelhead trout parr in B and C channels remained similar to 1994 estimates, the overall trend continues to show a decline in steelhead populations in Idaho since 1986 (Table 4, Figure 5). Mean PCC for all classes of steelhead in 1995 were lower than the 11-year average (Table 4). Wild A-run steelhead and natural B-run populations averaged 37% and 23% of carrying capacity, respectively, similar to 1994 estimates. Wild B-run and natural A-run steelhead declined from 1994 estimates, averaging 10% of carrying capacity for wild B-run and 7% for natural A-run steelhead trout parr.

Chinook Salmon Parr

In 1995, wild and natural spring and summer chinook parr densities were down from those of the parent generations four and five years previous. The 1990 and 1991 wild spring and summer chinook densities averaged 4.9/100 m² and 3.4/100 m², respectively, compared to 0.2/100 m² in 1995 (Table 5, Figure 6). The parent generation of 1995 natural spring and summer chinook parr (which averaged 1.2/100 m²) had parr densities of 6.3/100 m² in 1990 and 2.7/100 m² in 1991. This lagged comparison indicates that, in aggregate, wild and natural chinook parr populations did not meet replacement levels.

Densities-In 1995, densities of wild and natural classes of spring and summer chinook were 2% and 5%, respectively, of those in 1994 (Table 5, Figure 6). Wild spring and summer chinook salmon parr densities averaged 0.2/100 m², the lowest on record. Natural spring and summer chinook salmon parr averaged 1.2/100 m² in 1995, also the lowest on record. Out of the last five years (the length of the chinook life cycle) only one year class of wild and natural spring and summer chinook showed even moderate strength (1993 brood year or 1994 parr). The parr density patterns generally mirror the spring and summer chinook salmon spawning escapements which are indexed by redd counts (Elms-Cockrum 1996).

Chinook salmon parr densities in C channels are summarized by cell and class in Table 4. No age 0⁺ chinook salmon parr were counted in C channels in 1995 in the following cells and classes: wild spring chinook salmon in the Salmon River Canyon tributaries (cell 2); wild summer chinook salmon parr in the Middle Fork Salmon River (cell 6); natural spring chinook salmon parr in the Lemhi River (cell 9), the upper Salmon River (cell 10), the Lochsa River (cell 13), and the mainstem Clearwater River and tributaries (cell 15); the number of sections surveyed in each of these cells was small however. The highest mean densities for age 0⁺ chinook salmon parr were for natural spring chinook salmon in the headwaters Salmon River (cell 11) and the Selway River (cell 14), both at 4.05/100 m².

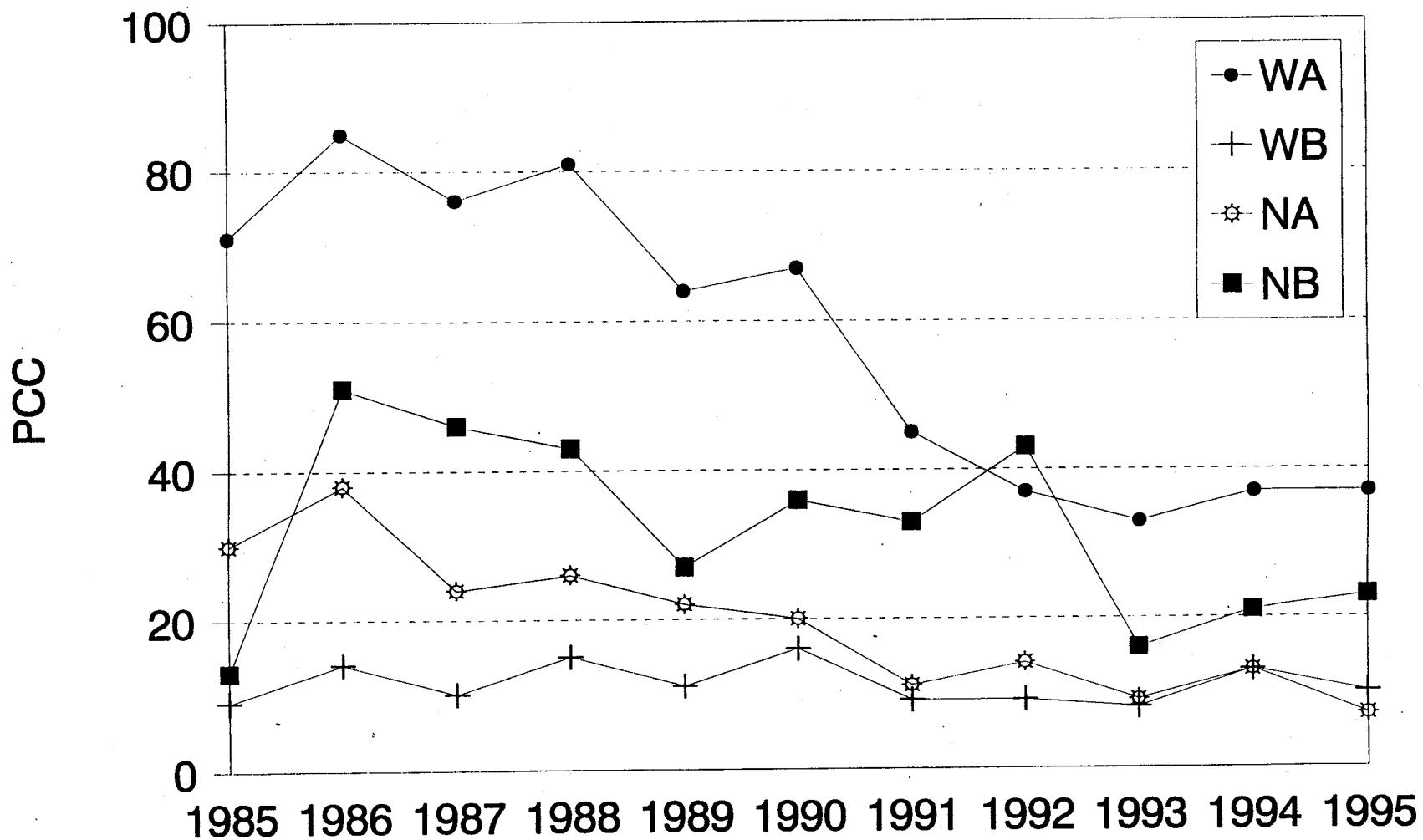


Figure 5. Mean annual percent of carrying capacity of four classes of steelhead trout parr (age 1+ and 2+ in B and C channels) in Idaho, 1985-1995.

Table 5. Mean percent of rated carrying capacity (PCC) of age 0+ chinook salmon parr in B and C channels, and density of age 0+ chinook salmon parr in C channels, by class and year, 1985-1995.

Year	PCC (by Class ^a)		C Channel Density (by Class)	
	WSp/WSu	NSp/NSu	WSp/WSu	NSp/NSu
1985	9	19	13.0	16.2
1986	12	18	15.4	18.7
1987	15	22	23.9	21.8
1988	11	17	16.7	18.5
1989	12	23	13.9	32.5
1990	5	6	4.9	6.3
1991	2	3	3.4	2.7
1992	6	4	6.6	5.0
1993	2	5	2.7	5.6
1994	11	28	11.0	24.1
1995	0.4	2	0.2	1.2
Mean	8.0	13.4	10.2	13.9
SD of Annual Means	4.9	9.5	7.2	10.3

^aWSp=wild spring, Wsu=wild summer, Nsp=natural spring, Nsu=natural summer.

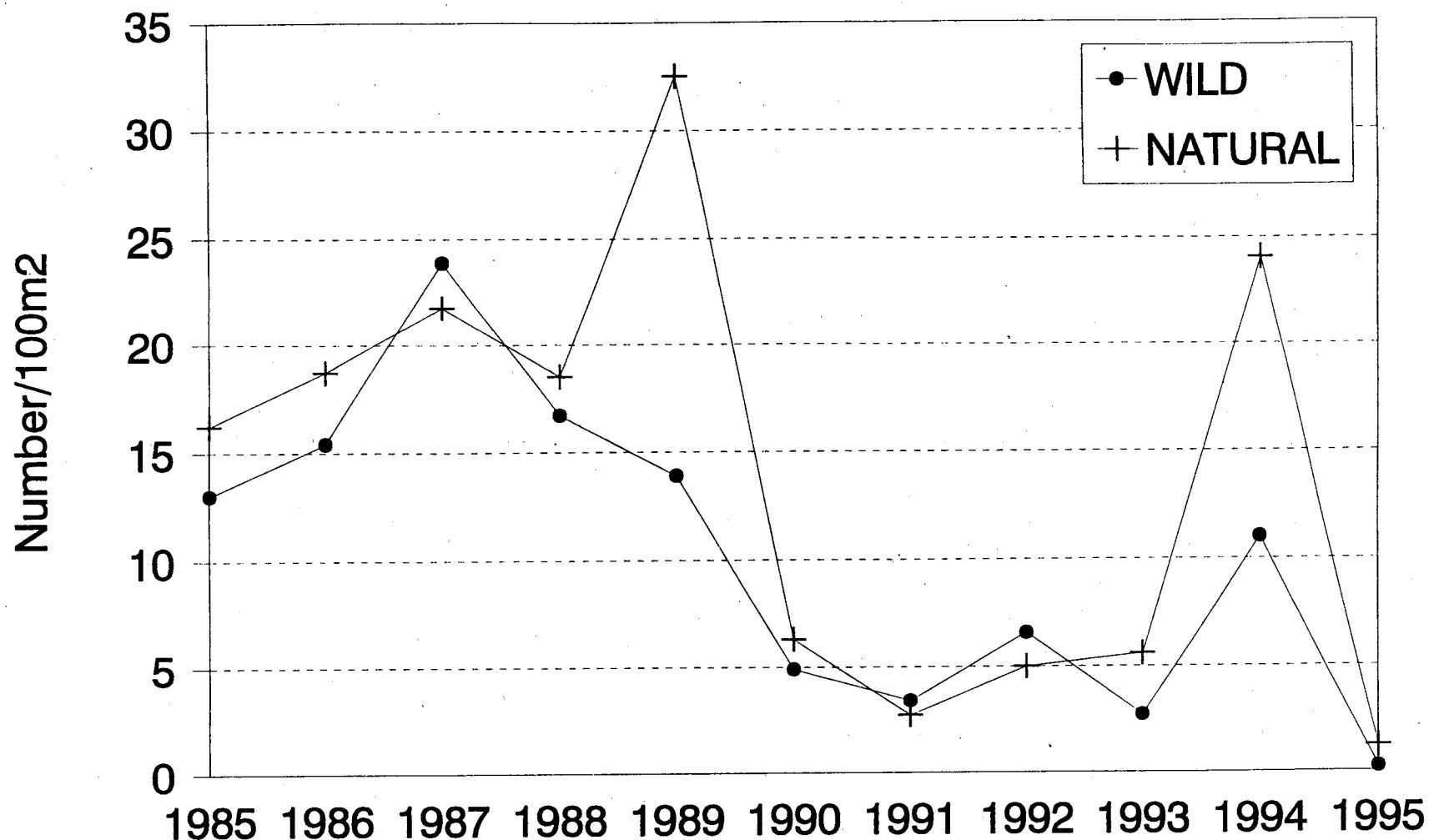


Figure 6. Mean annual density (number/100 m² in C channels) of two classes of chinook salmon parr (age 0+) in Idaho, 1985-1995.

Percent Carrying Capacity-PCC estimates in 1995 have paralleled the density estimates. The overall trends have been declining from 1985 to 1995 (Table 5, Figure 7), and PCC for both classes of chinook salmon parr in 1995 were the lowest on record (0.4% and 2.0% for wild and natural classes, respectively).

Future Direction and Recommendations

The GPM database was initially developed based on project-specific data needs (i.e., evaluating habitat improvements), with overall monitoring being a secondary priority. Since these project-specific evaluations have been completed, for the most part, overall monitoring has become the top priority. An overall GPM sampling design was developed (Leitzinger and Holubetz 1994) for implementation in 1995 and future years (Appendix B). The plan was designed to provide coverage for stocks and geographic areas defined in the IDFG Anadromous Fish Management Plan (IDFG 1992). The sampling scheme prioritizes GPM streams based on stock, geographic area, habitat type, and channel type so that all subbasins are adequately sampled.

Steelhead trout have a complex life cycle which varies among geographic location, type, and habitat (Scott and Crossman, 1973). Length-at-age is difficult to generalize over broad geographic areas, such as streams throughout Idaho, because of this variation. When the GPM project began in 1984, a length-at-age classification was developed which defined ranges for age 0⁺ steelhead at less than 74.0 mm, age 1⁺ from 74.0 to 151.9 mm, and age 2⁺ from 152.0 to 227.9 mm. This classification was based on steelhead length-at-age data from the Middle Fork and South Fork Salmon rivers (Petrosky and Holubetz, 1985). This length-at-age classification currently encompasses all classes of steelhead trout in the Snake, Salmon, and Clearwater River drainages in the existing GPM database.

There has been some concern among the GPM cooperators that the length-at-age breakdown for steelhead trout overestimates age 1⁺ parr density and underestimates age 2⁺ parr density. Therefore, length classes should be reviewed and revised as needed in the GPM database for different populations, geographic areas, and elevations to account for different growth rate patterns. Age misclassification could bias age 1⁺ and age 2⁺ steelhead density estimates, analyses of brood year strength, and life stage survival rate estimates. However, the steelhead trout PCC statistic would be relatively insensitive to age misclassification.

With 11 years of data from the GPM project, and other projects such as Idaho Supplementation Studies (ISS), Steelhead Supplementation Studies (SSS), and Intensive Smolt Monitoring (ISM), data have been collected which may help refine the length at age of steelhead trout for specific populations and geographic areas (Table 6). The elevation and thermal regime of a stream reach, for instance, may largely control the growth rate, with lower elevation streams producing larger parr and younger aged smolts (Chuck Huntington, personal communication). Also, because parr may continue to grow an estimated 9 mm per month

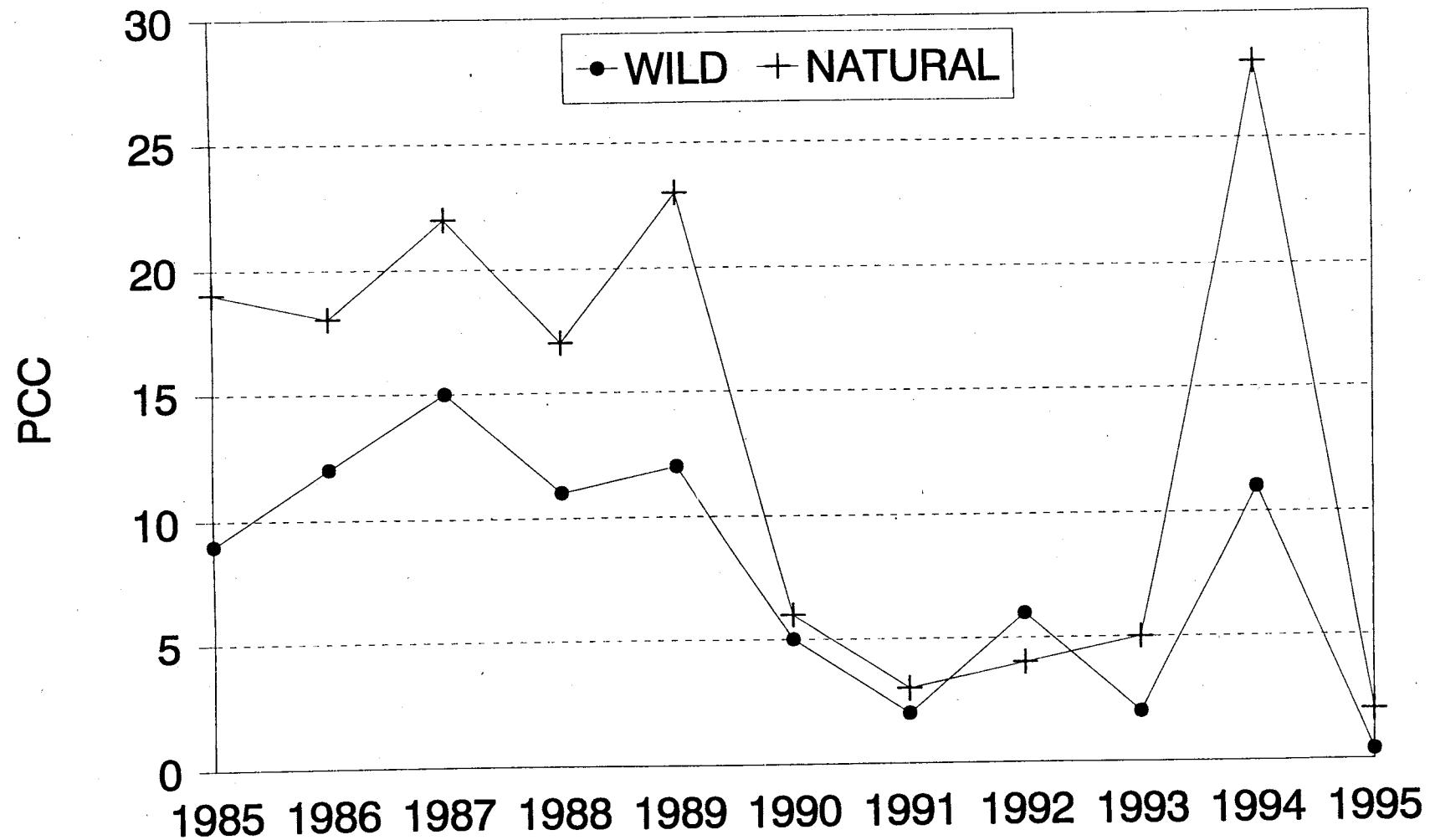


Figure 7. Mean annual percent of carrying capacity of two classes of chinook salmon parr (age 0+ in B and C channels) in Idaho, 1985-1995.

Table 6. Summary of length at age information for steelhead trout by drainage.

Drainage	Length at Age (mm)				Source
	0+	1+	2+	3+	
<u>GENERAL PARR MONITORING GUIDELINES</u>					
All Drainages	<74	74-152	152-228	>228	Petrosky & Holubetz (1985) IDFG
<u>CLEARWATER RIVER DRAINAGE</u>					
Lower Lochsa River	<75	75-127	127-203	>203	Chuck Huntington (pers.com.) Clearwater Biostudies
Lower Lochsa River		135-140	160-170		Alan Byrne (pers.com.) IDFG
<u>SALMON RIVER DRAINAGE</u>					
Upper Salmon River		<90	90-200	>200	Russ Kiefer (pers.com.) IDFG
Middle Fork Salmon River	<70	70-130	130-200	>200	Thurow (1985) IDFG
Middle Fork Salmon River	<70	70-130	130-200	>200	Everest (1969)
South Fork Salmon River	<70	70-130	130-200	>200	Thurow (1987) IDFG
<u>SNAKE RIVER DRAINAGE</u>					
Lower Granite Dam			120-250	>250	Unpublished, 1977 Idaho Coop. Fishery Unit

(Everest 1969), the timing of a survey, combined with the existing classification, may bias estimates of the number of smolts (i.e., a steelhead trout parr observed in the upper Salmon River in July and falling in the age 1+ category may outmigrate that fall classified as age 2; Russ Kiefer, personal communication). Historical parr density data were entered by three-inch increments into the GPM database, but archived field data sheets contain records by one-inch increments (Appendices C1 and C2). The historical data could be re-entered into GPM database by one-inch increments to provide the flexibility needed to better represent steelhead trout age structure for specific drainages.

The future plans for the Idaho Natural Production Monitoring Program are to incorporate into the GPM database the data from the intensive studies now being conducted, namely Idaho Supplementation Studies (ISS), Steelhead Supplementation Studies (SSS), and Wild Steelhead Studies (WSS). Additional data from the U.S. Forest Service or other entities may be included if appropriate. This will greatly increase our sample size in most stream classes and cells, as well as our ability to more accurately assess population status of chinook salmon and steelhead trout parr in Idaho.

Table 7 summarizes the number of cells sampled in each anadromous fish class in Idaho, the number of streams sampled, and the number of GPM sites by channel type sampled in 1995. It also lists the number of streams being sampled intensively, and the number of those that do and do not already contain GPM sites.

By incorporating the intensive data from 1995 into the GPM database, we would add data from a total of 77 streams. There would be 57 new streams added that are not presently in the database, and additional sites in 20 streams. The number of sites sampled in each of these intensive streams is not summarized at this point, but it ranges from roughly 12 to 50 per stream.

Databases and programs to summarize the data are currently being developed for these intensive data independently from the existing GPM database. Work has begun to link the various databases so that the intensive data can be incorporated into the GPM data. In addition, these databases will be linked to StreamNet (formerly, Coordinated Information System) to facilitate information exchange.

The GPM data are also relevant to an identified need in PATH (Plan for Analyzing and Testing Hypotheses, Project 96-8) to compare densities of juvenile salmon, steelhead, and resident fish among streams from different land use classes to index population responses in good and poor habitat (Marmorek and Peters 1996). The PATH project was established under the NMFS 1995-1998 Biological Opinion on Federal Columbia River Power System Operations in 1995 to resolve controversy about competing hypotheses related to the relative effects of the "four H's" (hydropower, habitat, hatcheries, and harvest) and climate patterns to the decline of Snake River salmon, and to assist upcoming recovery decisions.

Table 7. Breakdown of 1995 GPM sampling by classes of anadromous fish and channel type.

Class	Steelhead					Chinook				
	WA	WB	NA	NB	Total	Wsp	Wsu	Nsp	Nsu	Total
Number cells	5	3	7	3	18	6	2	8	2	18
Number streams	10	31	19	18	78	16	4	50	8	78
Number Sites										
B-Channel	18	48	51	47	164	24	4	119	17	164
C-Channel	2	33	49	33	117	20	5	83	9	117
Total ^a	20	81	100	80	281	44	9	202	26	281
Number of streams currently being sampled intensively										
w/GPM sites	5	10	5	0	20	7	2	8	5	22
w/o GPM sites	5	20	13	19	57	9	2	40	3	54
Total ^b	10	30	18	19	77	16	4	48	8	76

^a There were 2 streams with 3 sites sampled that were not rated as steelhead spawning and rearing streams.

^b There were 6 streams with 9 sites sampled that were not rated as chinook salmon spawning and rearing streams.

The GPM database, containing eleven years of chinook salmon, steelhead trout, and resident salmonid densities, will be summarized and analyzed by three land use classes used in PATH: 1) little or no impact (i.e., wilderness, roadless); 2) moderate impact; and 3) heavy impact. For the PATH analysis, the GPM database will be related to the spatial scales used in the Eastside Assessment and Upper Columbia Basin Environmental Impact Statement of the U.S. Forest Service and Bureau of Land Management, with densities analyzed within the three classes. Huntington (1995) previously used a similar approach to compare resident and anadromous fish densities in the Clearwater National Forest streams between "managed" and "unmanaged" land use classes. The PATH analysis may also incorporate specific habitat variables from GPM (e.g. channel type, percent sand, gradient, stream size, etc.) and the Eastside Assessment and upper Columbia Basin projects (Overton et al. 1995).

The PATH project to date has relied extensively on historic spawner-recruit information in the spring/summer chinook analyses and hypothesis testing (Beamesderfer et al. 1996; Deriso et al. 1996; Schaller et al. 1996). There is a paucity of this type of historic information for Snake River steelhead trout populations due to the species' complex life cycle, spawn timing and difficulty of monitoring redds, the logistics and cost of weir operations, and funding processes which have prioritized chinook salmon research. Therefore the GPM database, combined with more intensive studies, may be particularly important for future analysis of status and evaluation of recovery strategies for Snake River steelhead trout.

ACKNOWLEDGEMENTS

We would like to express our thanks to IDFG regional managers and biologists in Lewiston, Salmon, and McCall and IDFG research crews in Nampa who collected the majority of the data, and to Sherri Moedl (IDFG Fisheries Bureau) for manuscript formatting. Additional thanks go to the ISS cooperators: the Shoshone-Bannock Tribes, the Nez Perce Tribe, and the U.S. Fish and Wildlife Service's Fisheries Resource Office in Ahsahka, Idaho who worked closely with IDFG to standardize data collection and reporting.

Funding was provided by the U.S. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife through Project No. 91-73; Contract No. DE-B179-91BP21182.

LITERATURE CITED

- Beamesderfer, R.C.P., H.A. Schaller, M.P. Zimmerman, C.E. Petrosky, O.P. Langness, and L. LaVoy. 1996. Spawner-recruit data for spring and summer chinook salmon populations in Idaho, Oregon, and Washington. October 1996 Draft Documentation for PATH - Plan for Analyzing and Testing Hypotheses, Retrospective Analysis.
- Deriso, R., D. Marmorek, and I. Parnell. 1996. Retrospective analysis of passage mortality of spring chinook of the Columbia River. Chapter 5. In: Marmorek, D.R. (ed.) and 21 co-authors. 1996. Plan for Analyzing and Testing Hypotheses (PATH). Final report on retrospective analysis for fiscal year 1996. Compiled and edited by ESSA Technologies Ltd., Vancouver, British Columbia.
- Elms-Cockrum, T.J. 1996. Idaho Department of Fish and Game Salmon Spawning Ground Surveys, 1995. Pacific Salmon Treaty Program. Award No. NA47FPO346. 69 p.
- Everest, F.H. 1969. Habitat selection and spacial interaction by juvenile chinook and steelhead trout in two Idaho streams. Ph.D. Thesis, University of Idaho, Moscow.
- Hall-Griswold, J.A., E.J. Leitzinger, and C.E. Petrosky. (in press). Idaho habitat/natural production monitoring, Part I, General Monitoring Subproject Annual Report 1994. Project 91-73. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.
- Hankin, D.G. and G.H. Reeves. 1988. Estimating total fish abundance and total habitat area in small streams based on visual estimation methods. Canadian Journal of Fisheries and Aquatic Sciences. 45:834-844.
- Hillman, T.W., J.W. Mullan and J.S. Griffith. 1992. Accuracy of underwater counts of juvenile chinook salmon, coho salmon, and steelhead. North American Journal of Fisheries Management. 12:598-603.
- Huntington, C.W. 1995. Fish habitat and salmonid abundance within managed and unloaded landscapes on the Clearwater National Forest, Idaho. Eastside Ecosystem Management Project, USDA Forest Service. Project Order No. 43-0E00-4-9106. 63 p.
- Idaho Cooperative Fishery Research Unit. 1977. University of Idaho, Moscow (unpublished manuscript).
- IDFG (Idaho Department of Fish and Game). 1992. Anadromous Fish Management Plan, 1992-1996. 217 p.

IDFG et al. (Idaho Department of Fish and Game, Nez Perce Tribe of Idaho, and Shoshone-Bannock Tribes of Fort Hall). 1990. Salmon River subbasin salmon and steelhead production plan. Prepared for: Northwest Power Planning Council, Portland, Oregon.

Kiefer, R.B., and J.N. Lockhart. 1994. Intensive evaluation and monitoring of chinook salmon and steelhead trout production, Crooked River and Salmon River sites. Idaho Department of Fish and Game. Annual progress report, 1992. Project 91-73. Prepared for Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.

Leitzinger, E.J., and T.B. Holubetz. 1994. Prioritization of snorkel streams. Idaho Department of Fish and Game, Intradepartmental memo. November 28, 1994. 6 p.

Leitzinger, E.J., and C.E. Petrosky. (in print). Idaho habitat/natural production monitoring, Part I, General Monitoring Subproject. Annual Report 1994. Project 91-73. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.

Marmorek, D., And C. Peters (editors) and 24 co-authors. 1996. Conclusions of FY96 retrospective analyses. PATH - Plan for Analyzing and Testing Hypotheses. Final Report on Retrospective Analysis for Fiscal Year 1996. December 10, 1996.

NPT and IDFG (Nez Perce Tribe of Idaho and Idaho Department of Fish and Game). 1990. Clearwater River subbasin salmon and steelhead production plan. Prepared for: Northwest Power Planning Council, Portland, Oregon.

NPPC (Northwest Power Planning Council). 1986. Columbia River basin fishery planning model - technical discussion paper.

NPPC and BPA (Northwest Power Planning Council and Bonneville Power Administration). 1989. U.S. Environmental Protection Agency's river reach file. Hydrologic segment plots, Idaho. Northwest Rivers Information System.

Overton, C.K., J.D. McIntyre, R. Armstrong, S.L. Whitwell, and K.A. Duncan. 1995. User's Guide to Fish Habitat: Descriptions that Represent Natural Conditions in the Salmon River Basin, Idaho. Gen. Tech. Rep. INT-GTR-322. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 142 p.

Petrosky, C.E., and T.B. Holubetz. 1985. Idaho habitat evaluation for off-site mitigation record. Annual report, 1984. Project 83-7. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.

- Petrosky, C.E., and T.B. Holubetz. 1986. Idaho habitat evaluation for off-site mitigation record. Annual report, 1985. Project 83-7. Department of Energy. Bonneville Power Administration, Division of Fish and Wildlife.
- Petrosky, C.E. and T.B. Holubetz. 1987. Evaluation and Monitoring of Idaho Habitat enhancement and anadromous fish natural production. Annual report, fiscal year 1986. Project 83-7. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.
- Petrosky, C.E., and T.B. Holubetz. 1988. Idaho habitat evaluation for off-site mitigation record. Annual report, 1987. Project 83-7. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.
- Rich, B.A., and C.E. Petrosky. 1994. Idaho habitat/natural production monitoring, Part I, General Monitoring Subproject Annual Report 1992. Project 91-73. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.
- Rich, B.A., W. Schrader, and C.E. Petrosky. 1993. Idaho habitat/natural production monitoring, Part I, General Monitoring Subproject Annual Report 1991. Project 91-73. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.
- Rich, B.A., R.J. Scully, and C.E. Petrosky. 1992. Idaho habitat/natural production monitoring, Part I, General Monitoring Subproject Annual Report 1990. Project 83-7. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife.
- Rosgen, D.L. 1985. A stream classification system. North America Riparian Conference. Tucson, Arizona. April 16-18, 1985.
- Schaller, H.A., C.E. Petrosky, and O.P. Langness. 1996. Contrasts in stock recruitment patterns of Snake and Columbia River spring and summer chinook populations. Chapter 3. In: Marmorek, D.R. (Ed.) and 21 co-authors. 1996. Plan for Analyzing and Testing Hypotheses (PATH). Final report on retrospective analysis for fiscal year 1996. Compiled and edited by ESSA Technologies Ltd., Vancouver, B.C.
- Scott, W.B., and E.J. Crossman. 1973. Freshwater Fishes of Canada. Fisheries Research Board of Canada, Ottawa. Bulletin 184. 966 p.
- Scully, R.J., E.J. Leitzinger, and C.E. Petrosky. 1990. Idaho habitat evaluation for off-site mitigation record. Part I in Idaho Department of Fish and Game. 1990. Idaho habitat evaluation for off-site mitigation record. Annual report 1988. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife. Project 83-7.

Scully, R.J., and C.E. Petrosky. 1991. Idaho habitat/natural production monitoring. Idaho Department of Fish and Game. 1991. Idaho Department of Fish and Game. 1991. Idaho habitat evaluation for off-site mitigation record. Annual report, fiscal year 1989. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife. Project 83-7.

TAC (U.S. vs. Oregon Technical Advisory Committee). 1991. Columbia River Fisheries Management Plan All Species Review.

Thurow, R.T. 1985. Middle Fork Salmon River Fisheries Investigations. River and Stream Investigations. Job Completion Report, Project F-73-R-6. Idaho Department of Fish and Game. 100p.

Thurow, R.T. 1987. Evaluation of the South Fork Salmon River steelhead trout fishery restoration program. Report to the U.S. Department of the Interior, Fish and Wildlife Service, Lower Snake River Fish and Wildlife Compensation Plan. Contract No. 14-16-0001-86505. Idaho Department of Fish and Game. Boise. 154 p.

WDF et al. (Washington Department of Fisheries, Confederated Tribes of the Umatilla Indian Reservation, Idaho Department of Fish and Game, Nez Perce Tribe of Idaho, Oregon Department of Fish and Wildlife, Shoshone-Bannock Tribes of Fort Hall, and Washington Department of Wildlife). 1990. Snake River subbasin salmon and steelhead production plan. Prepared for: Northwest Power Planning Council, Portland, Oregon.

Appendix A-1.

**General Parr Monitoring Snorkel Survey Sections
for project 91-73.**

Appendix A-1. Monitoring section names, channel types (B or C), steelhead trout classification (wild or natural, A or B run), chinook salmon classification (wild or natural, spring or summer), densities and percent carrying capacities for all sites sampled in 1995.

Stream Name	Strata	Section	Drainage	Channel Type	SALMON RIVER DRAINAGE								Priority Class
					Steelhead Class	Steelhead W vs N	Steelhead Age 1+ Density no/100msq	Steelhead Age 2+ Density no/100msq	Steelhead Percent Carrying Capacity	Chinook Class	Chinook W vs N	Chinook Age 0+ Density no/100msq	Chinook Percent Carrying Capacity
Snake River, above mouth Salmon River													
GRANITE CR	LOWER	1	101	B	NA		4.84	3.82	43.30 WSPR		0.00	0.00	3
GRANITE CR	UPPER	3	101	B	NA		7.97	6.37	71.70 WSPR		0.00	0.00	3
SHEEP CR		1	101	B	WA		7.69	4.23	59.60 WSPR		0.00	0.00	1
SHEEP CR		2	101	B	WA		5.17	2.78	39.75 WSPR		0.00	0.00	1
Lower Salmon River													
SLATE CR		2	209	B	NAB		2.47	1.35	19.10 WSPR		0.11	0.25	2
SLATE CR		3	209	B	NAB		3.60	1.40	25.00 WSPR		0.00	0.00	2
SLATE CR		4	209	B	NAB		2.15	1.79	19.70 WSPR		0.72	1.64	2
SLATE CR		6	209	B	NAB		2.30	1.54	19.20 WSPR		0.00	0.00	2
WHITEBIRD CR	MAINSTEM	1	209	B	WA		9.54	1.05	52.95 WSPR		0.00	0.00	1
WHITEBIRD CR, S FK	SF, #2	3	209	B	WA		13.76	0.37	70.65 WSPR		0.00	0.00	1
Little Salmon River													
LITTLE SALMON R		1	210	B	NAB		6.92	1.25	40.85 NSPR		0.00	0.00	3
LITTLE SALMON R		1.5	210	B	NAB		4.62	2.07	33.45 NSPR		0.00	0.00	3
LITTLE SALMON R		2	210	B	NAB		2.46	1.92	21.90 NSPR		0.11	0.25	3
RAPID R	ABV W FK	CASTLE CR	210	B	WA		3.04	2.39	27.15 NSUM		0.00	0.00	1
RAPID R	ABV W FK	COPPER CR	210	B	WA		4.15	1.80	29.75 NSUM		0.83	1.89	1
RAPID R	ABV W FK	WYANT	210	B	WA		3.76	3.48	36.20 NSUM		0.00	0.00	1
RAPID R	BLW W FK	6	210	B	WA		5.88	1.76	38.20 NSUM		0.00	0.00	1
RAPID R	BLW W FK	7 LWR BRDG	210	B	WA		7.75	2.71	52.30 NSUM		0.00	0.00	1
RAPID R	BLW W FK	RAP2	210	B	WA		4.91	2.76	38.35 NSUM		0.46	1.05	1
RAPID R, W FK	BLW FALLS	RAP1	210	B	WA		5.69	3.02	43.55 NSUM		0.00	0.00	1
Salmon River Canyon													
BARGAMIN CR		LOWER	207	B	WA		1.53	1.41	14.70 WSPR		0.00	0.00	3
BARGAMIN CR		UPPER	207	B	WA		3.15	1.86	25.05 WSPR		0.00	0.00	3
CHAMBERLAIN CR		CHA1	207	B	WA		1.38	0.62	10.00 WSPR		4.28	9.73	1
CHAMBERLAIN CR		CHA4	207	C	WA		1.17	0.68	13.21 WSPR		0.00	0.00	1
CHAMBERLAIN CR, W FK		CHA2	207	C	WA		6.46	2.61	64.79 WSPR		0.00	0.00	1
CHAMBERLAIN CR, W FK		CHA3	207	B	WA		2.28	0.91	22.79 WSPR		0.00	0.00	1

BIG SPRINGS CR	LEM1	A	204	C	NA	22.78	4.25	135.15	NSPR	0.00	0.00	1
LEMHI R	1	2B	204	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
LEMHI R	1	LEM3A	204	B	NA	0.12	1.76	9.40	NSPR	0.24	0.22	1
LEMHI R	1	PWRHS L58A	204	C	NA	0.29	2.48	13.85	NSPR	3.64	3.37	1

Headwaters Salmon River

ALTURAS LK CR	1	1A	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
ALTURAS LK CR	1	1B	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
ALTURAS LK CR	1	1C	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
ALTURAS LK CR	2	2A	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
ALTURAS LK CR	2	2B	201	C	NA	0.00	0.00	0.00	NSPR	0.14	0.13	1
ALTURAS LK CR	2	2C	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
ALTURAS LK CR	3	3A	201	C	NA	0.00	0.00	0.00	NSPR	0.34	0.31	1
ALTURAS LK CR	3	3B	201	C	NA	0.09	0.18	2.70	NSPR	0.62	0.57	1
ALTURAS LK CR	3	3C	201	C	NA	0.00	0.00	0.00	NSPR	0.70	0.65	1
ALTURAS LK CR	4	4A(2A)	201	B	NA	0.11	0.00	1.10	NSPR	0.00	0.00	1
ALTURAS LK CR	4	4B(2B)	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
ALTURAS LK CR	5	5A(3A)	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
ALTURAS LK CR	5	5B(3B)	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
FOURTH OF JULY CR	1	A	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
FOURTH OF JULY CR	1	B	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
FRENCHMAN CR	1	1A	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	2
FRENCHMAN CR	1	1B	201	B	NA	3.12	0.52	26.00	NSPR	0.52	0.68	2
FRENCHMAN CR	2	2A	201	B	NA	1.71	0.00	12.21	NSPR	64.48	83.74	2
FRENCHMAN CR	2	2B	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	2
GOLD CR	1	1A	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
GOLD CR	1	1B	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
HUCKLEBERRY CR	1	1A	201	B	NA	0.00	0.00	0.00	NSPR	0.95	1.23	3
HUCKLEBERRY CR	1	1B	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
HUCKLEBERRY CR	2	2A	201	C	NA	0.00	0.00	0.00	NSPR	0.23	0.30	3
HUCKLEBERRY CR	2	2B	201	C	NA	0.00	0.26	4.33	NSPR	0.00	0.00	3
PETTIT LK CR	1	1A	201	C	NA	0.00	0.00	0.00	NSPR	3.47	4.51	3
PETTIT LK CR	1	1B	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
POLE CR	1	1A	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
POLE CR	1	1AB	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
POLE CR	1	1B	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
POLE CR	2	2A	201	C	NA	0.60	0.60	12.00	NSPR	0.00	0.00	3
POLE CR	2	2AB	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	3
SALMON R	10	A	201	B	NA	0.42	0.21	0.00	NSPR	0.00	0.00	1
SALMON R	10	AB	201	B	NA	0.00	0.18	0.00	NSPR	5.17	0.00	1
SALMON R	10	B	201	C	NA	0.00	0.00	0.00	NSPR	9.09	11.81	1
SALMON R	3	3BRB	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
SALMON R	3	3SCA	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
SALMON R	3	3SCB	201	C	NA	0.00	0.28	2.00	NSPR	21.48	48.82	1
SALMON R	3	A	201	B	NA	0.04	0.00	0.29	NSPR	0.00	0.00	1
SALMON R	3	B	201	B	NA	0.00	0.03	0.21	NSPR	0.00	0.00	1
SALMON R	3	BRA	201	C	NA	0.05	0.08	0.93	NSPR	2.63	5.98	1
SALMON R	4	4BRA	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
SALMON R	4	4BRB	201	B	NA	0.00	0.06	0.43	NSPR	1.05	1.36	1
SALMON R	4	4SCA	201	C	NA	0.00	0.00	0.00	NSPR	0.70	0.91	1
SALMON R	4	4SCB	201	C	NA	0.00	0.00	0.00	NSPR	1.54	2.00	1
SALMON R	4	A	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
SALMON R	4	B	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1

SALMON R	5	A	201	B	NA	0.00	0.00	0.00 NSPR	0.07	0.09	1
SALMON R	5	B	201	B	NA	0.00	0.00	0.00 NSPR	0.14	0.18	1
SALMON R	6	6-SA	201	B	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	6	6-SB	201	B	NA	0.00	0.00	0.00 NSPR	0.35	0.45	1
SALMON R	6	A	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	6	B	201	B	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	7	7-SA	201	C	NA	0.00	0.00	0.00 NSPR	7.12	9.25	1
SALMON R	7	7-SB	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	7	A	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	7	B	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	8	8-SA	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	8	8-SB	201	C	NA	0.00	0.00	0.00 NSPR	0.41	0.53	1
SALMON R	8	A	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	8	B	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	1
SALMON R	9	A	201	C	NA	0.37	0.37	5.29 NSPR	0.74	0.96	1
SALMON R	9	B	201	B	NA	2.23	0.00	15.93 NSPR	0.00	0.00	1
SALMON R, E FK	ABOVE-WEIR	2	201	C	NAB	0.07	0.00	0.35 NSPR	0.00	0.00	1
SALMON R, E FK	ABOVE-WEIR	3	201	B	NAB	0.29	0.18	2.35 NSPR	0.00	0.00	1
SALMON R, E FK	BLW WEIR	FOX CR	201	B	NAB	0.38	0.05	2.15 NSPR	4.26	3.94	1
SALMON R, E FK	BLW WEIR	ZIEGLER HL	201	B	NAB	0.53	0.21	5.29 NSPR	0.95	1.23	1
SMILEY CR	1A	1A	201	B	NA	4.00	0.00	40.00 NSPR	0.22	0.29	3
SMILEY CR	1A	1AA	201	B	NA	0.00	0.00	0.00 NSPR	0.00	0.00	3
SMILEY CR	1B	1B/S1	201	B	NA	0.12	0.00	1.20 NSPR	0.00	0.00	3
SMILEY CR	1B	1B/S2	201	B	NA	0.00	0.00	0.00 NSPR	0.00	0.00	3
SMILEY CR	2	2AS4	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	3
SMILEY CR	2	2B	201	C	NA	0.00	0.00	0.00 NSPR	0.00	0.00	3
WILLIAMS CR	1	1A	201	C	NA	0.00	0.00	0.00 NSPR	18.00	23.38	3
WILLIAMS CR	1	1B	201	C	NA	0.00	0.00	0.00 NSPR	94.80	123.12	3
YELLOWBELLY CR	1	1A	201	B	NA	0.00	0.00	0.00 NSPR	0.44	0.57	3

35

South Fork Salmon River

BUCKHORN CR	LOWER	NR MOUTH	208	B	WB	1.32	0.00	9.43 NSUM	0.00	0.00	3
JOHNSON CR	UPPER I	M1	208	C	WB	0.98	0.37	13.50 NSUM	0.00	0.00	1
JOHNSON CR	UPPER I	M2	208	C	WB	0.16	0.00	1.60 NSUM	0.00	0.00	1
JOHNSON CR	UPPER I	M3	208	C	WB	0.29	0.06	3.50 NSUM	0.00	0.00	1
JOHNSON CR	UPPER I	M3 SIDE	208	C	WB	0.00	0.00	0.00 NSUM	0.00	0.00	1
JOHNSON CR	UPPER I	PW1A	208	B	WB	0.00	0.00	0.00 NSUM	0.00	0.00	1
LAKE CR		BURGDORF	208	C	WB	0.00	0.00	0.00 WSUM	0.00	0.00	1
LAKE CR		WILLOW CR	208	C	WB	0.00	0.35	2.50 WSUM	0.00	0.00	1
LICK CR	LOWER	L1	208	B	WB	4.30	0.75	36.07 WSUM	0.00	0.00	2
LICK CR	LOWER	L3	208	B	WB	0.70	0.11	5.79 WSUM	0.00	0.00	2
ROCK CR	UPPER I	M1	208	C	WB	0.26	0.00	2.60 NSUM	0.00	0.00	1
SALMON R, S FK	2	STOLLE 1	208	C	WB	0.00	0.00	0.00 NSUM	0.06	0.14	1
SALMON R, S FK	2	STOLLE 2	208	C	WB	0.00	0.00	0.00 NSUM	0.00	0.00	1
SALMON R, S FK	3	5	208	B	WB	0.00	0.00	0.00 NSUM	9.11	20.70	1
SALMON R, S FK	ABV 4 MILE	11	208	B	WB	0.51	0.25	5.43 NSUM	6.62	15.05	1
SALMON R, S FK	AT GAUGE	POVERTY	208	C	WB	0.00	0.02	0.14 NSUM	5.95	13.52	1
SALMON R, S FK	BLW DIME	7	208	B	WB	1.17	1.02	15.64 NSUM	0.59	0.77	1
SALMON R, S FK	BLW FITSUM	16	208	B	WB	0.88	0.54	10.14 NSUM	1.33	3.02	1
SALMON R, S FK	TEEPEE	14	208	B	WB	0.21	0.11	2.29 NSUM	1.25	2.84	1
SALMON R, S FK, E FK	ABV JHNSN	3	208	B	WB	2.29	0.00	22.90 NSUM	0.16	0.36	1
SALMON R, S FK, E FK	ABV JHNSN	SUGAR CR	208	B	WB	0.29	0.15	4.40 NSUM	0.00	0.00	1
SALMON R, S FK, E FK	BLW JHNSN	6 PARK CR	208	B	WB	0.03	0.00	0.21 NSUM	0.00	0.00	1
SAND CR	UPPER I	M2	208	C	WB	0.00	0.00	0.00 NSUM	0.00	0.00	1
SECESH R		GROUSE	208	C	WB	0.13	0.63	5.43 WSUM	0.13	0.17	1

SECESH R		LONG-GULCH	208	C	WB	0.00	0.00	0.00	WSUM	0.18	0.23	1
SECESH R		U-SCSH-MDW	208	C	WB	0.06	0.06	0.86	WSUM	0.84	1.09	1

Middle Fork Salmon River

BEAR VALLEY CR	1	A	205	B	WB	0.44	0.09	2.65	WSPR	0.00	0.00	2
BEAR VALLEY CR	2	A	205	C	WB	0.00	0.00	0.00	WSPR	0.12	0.16	2
BEAR VALLEY CR	2	B	205	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	2
BEAR VALLEY CR	3	A	205	C	WB	0.00	0.00	0.00	WSPR	0.24	0.31	2
BEAR VALLEY CR	5	A	205	C	WB	0.08	0.00	0.80	WSPR	0.00	0.00	2
BEAR VALLEY CR	7	BIG-MDW-L	205	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	2
BEAR VALLEY CR	9	B	205	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	2
BEAVER CR		1A	205	B	WB	0.61	0.37	7.00	WSPR	0.12	0.16	1
BEAVER CR		3B	205	C	WB	0.63	0.72	9.64	WSPR	0.00	0.00	1
BIG CR	UPPER	ABV HOGBK	206	B	WB	0.75	0.19	4.70	WSPR	0.00	0.00	1
BIG CR	UPPER	ABV JACOBS	206	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	1
BIG CR	UPPER	LOGAN CR	206	C	WB	0.46	0.00	2.30	WSPR	0.00	0.00	1
BIG CR	UPPER	NEAR FORD	206	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	1
CAPEHORN CR		1A	205	C	WB	0.13	0.00	0.93	WSPR	0.00	0.00	1
CAPEHORN CR		2B	205	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	1
KNAPP CR	1	1A	205	C	WB	0.27	0.14	2.93	WSPR	0.00	0.00	1
KNAPP CR	1	2B	205	C	WB	0.53	0.35	6.29	WSPR	0.35	0.32	1
KNAPP CR	1	DS DIV	205	B	WB	0.21	0.00	1.50	WSPR	0.00	0.00	1
KNAPP CR	1	LCKD FENCE	205	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	1
MARSH CR	1	A	205	B	WB	1.15	0.32	7.35	WSPR	0.46	1.05	1
MARSH CR	1	B	205	B	WB	3.24	1.69	24.65	WSPR	1.37	3.11	1
MARSH CR	4	B	205	C	WB	0.00	0.00	0.00	WSPR	0.74	0.96	1
MARSH CR	5	A	205	C	WB	0.22	0.00	2.20	WSPR	1.66	2.16	1
MARSH CR	6	A	205	C	WB	0.00	0.00	0.00	WSPR	0.00	0.00	1
MONUMENTAL CR	DS HOLYTER	MON5	206	B	WB	0.07	0.00	0.35	WSPR	0.00	0.00	2
MONUMENTAL CR		MON2	206	B	WB	2.09	0.00	10.45	WSPR	0.00	0.00	2
MONUMENTAL CR		MON3	206	B	WB	0.16	0.00	0.80	WSPR	0.00	0.00	2
MONUMENTAL CR, W FK		MON4	206	B	WB	0.00	0.00	0.00	WSPR	0.00	0.00	2

Upper Salmon River

PANTHER CR	ABOVE	PC10	203	C	NA	4.41	0.00	73.50	NSPR	0.00	0.00	3
PANTHER CR	ABOVE	PC9	203	C	NA	0.76	0.76	15.20	NSPR	0.00	0.00	3
PANTHER CR	DS-BIG D	PC4	203	B	NA	0.17	0.09	1.30	NSPR	0.00	0.00	3
PANTHER CR	DS-BLACK B	PC6	203	C	NA	0.14	0.00	0.70	NSPR	0.00	0.00	3
PANTHER CR	DS-CLEAR	PC1	203	B	NA	0.00	0.83	4.15	NSPR	0.00	0.00	3
SALMON R	2	B	201	B	NA	0.26	0.32	4.14	WSUM	0.00	0.00	3
SALMON R		RBNSN-BAR	201	B	NA	0.00	0.11	0.79	WSUM	0.18	0.23	3
VALLEY CR	1	B	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
VALLEY CR	3	A	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
VALLEY CR	3	B	201	C	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
VALLEY CR	6	B	201	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1

CLEARWATER RIVER DRAINAGE											
Channel	Steelhead Class W vs N	Steelhead Age 1+ Density	Steelhead Age 2+ Density	Steelhead Percent Carrying	Chinook Class W vs N	Chinook Age 0+ Density	Chinook Percent Carrying	Chinook Priority			

Stream Name	Strata	Section	Drainage	Type	A vs B	no/100msq	no/100msq	Capacity	Spr vs Sum	no/100msq	Capacity	Class
Mainstem Clearwater River (includes Middle Fork Clearwater R.)												
BIG CANYON CR		BRIDGE	306	B	WA	4.68	0.00	78.00	NSPR	0.00	0.00	1
ELDORADO CR	ABOVE	1HG	306	C	NB	0.21	0.00	2.10	NSPR	0.00	0.00	2
ELDORADO CR	ABOVE	2LG	306	C	NB	0.00	0.13	1.30	NSPR	0.00	0.00	2
ELDORADO CR	ABOVE	2M	306	C	NB	0.00	0.00	0.00	NSPR	0.00	0.00	2
ELDORADO CR	BELOW	1B	306	B	NB	1.30	0.00	13.00	NSPR	0.00	0.00	2
LOLO CR	DOWNSTREAM	DS6	306	B	NB	0.06	0.26	2.29	NSPR	0.06	0.14	1
LOLO CR	DOWNSTREAM	RUN6	306	B	NB	0.32	0.40	5.14	NSPR	0.00	0.00	1
LOLO CR	UPSTREAM	8303	306	C	NB	1.09	0.16	8.93	NSPR	0.00	0.00	1
LOLO CR	UPSTREAM	8360	306	B	NB	1.37	1.54	20.79	NSPR	0.34	0.44	1
LOLO CR	UPSTREAM	RUN1	306	B	NB	0.00	0.00	0.00	NSPR	0.20	0.26	1
LOLO CR	UPSTREAM	RUN7	306	B	NB	0.17	0.00	1.21	NSPR	0.17	0.22	1
MISSION CR	QUARRY	1	306	B	WA	2.77	0.00	13.85	NSPR	0.00	0.00	1
MISSION CR	QUARRY	2	306	B	WA	2.39	0.00	11.95	NSPR	0.00	0.00	1
South Fork Clearwater River												
AMERICAN R	2	1	305	C	NB	1.41	0.56	14.07	NSPR	0.00	0.00	2
AMERICAN R	3	2	305	C	NB	0.00	0.28	2.00	NSPR	0.00	0.00	2
CROOKED R	C	CAN1	305	B	NB	9.24	0.46	69.29	NSPR	0.00	0.00	1
CROOKED R	C	CAN2	305	B	NB	7.42	1.39	62.93	NSPR	0.00	0.00	1
CROOKED R	C	CAN3	305	B	NB	2.44	0.23	19.07	NSPR	0.31	0.40	1
CROOKED R	H	OROGRANDE1	305	B	NB	0.40	0.00	2.86	NSPR	0.40	0.91	1
CROOKED R	I	BOULDER-A	305	B	NB	1.67	0.61	16.29	NSPR	4.26	9.68	1
CROOKED R	I	BOULDER-B	305	B	NB	4.20	1.62	41.57	NSPR	12.17	27.66	1
CROOKED R	I	CONTROLA	305	B	NB	2.10	1.58	26.29	NSPR	0.88	2.00	1
CROOKED R	I	CONTROLB	305	B	NB	2.57	0.32	20.64	NSPR	19.45	44.20	1
CROOKED R	I	SILL-LOG-A	305	B	NB	1.50	1.12	18.71	NSPR	3.93	8.93	1
CROOKED R	I	SILL-LOG-B	305	B	NB	5.84	1.46	52.14	NSPR	9.50	21.59	1
CROOKED R	II	CONTROL1	305	B	NB	2.14	2.36	32.14	NSPR	2.81	3.65	1
CROOKED R	II	CONTROL2	305	B	NB	2.40	0.60	21.43	NSPR	0.17	0.22	1
CROOKED R	II	TREAT1	305	B	NB	4.00	2.30	45.00	NSPR	0.00	0.00	1
CROOKED R	II	TREAT2	305	B	NB	8.56	1.71	73.36	NSPR	0.34	0.44	1
CROOKED R	III	NATURAL1	305	C	NB	0.38	0.16	2.70	NSPR	0.05	0.11	1
CROOKED R	III	NATURAL2	305	C	NB	3.15	0.12	23.36	NSPR	0.00	0.00	1
CROOKED R	III	NATURAL3	305	C	NB	4.27	0.83	36.43	NSPR	0.00	0.00	1
CROOKED R	IV	MEANDER1	305	C	NB	0.42	0.00	2.10	NSPR	0.21	0.48	1
CROOKED R	IV	MEANDER2	305	C	NB	0.90	0.52	10.14	NSPR	0.00	0.00	1
CROOKED R	IV	MEANDER3	305	C	NB	0.66	0.17	5.93	NSPR	0.00	0.00	1
CROOKED R	PONDS A	POND N93	305	C	NB	11.63	0.00	83.07	NSPR	0.00	0.00	1
CROOKED R	PONDS A	POND U	305	C	NB	8.93	3.50	88.79	NSPR	2.60	3.38	1
CROOKED R	PONDS A	POND11	305	C	NB	3.76	1.20	35.43	NSPR	0.00	0.00	1
CROOKED R	PONDS B	POND S1	305	C	NB	7.23	1.81	64.57	NSPR	0.00	0.00	1
CROOKED R	PONDS B	POND S2	305	C	NB	2.53	1.15	26.29	NSPR	0.00	0.00	1
CROOKED R	PONDS B	POND S3	305	C	NB	0.47	0.00	2.35	NSPR	0.00	0.00	1
JOHNS CR	1	2	305	B	NB	1.35	0.00	6.75	NSPR	0.00	0.00	3
JOHNS CR	2	3@OPEN CR	305	B	NB	0.52	0.26	3.90	NSPR	0.00	0.00	3
JOHNS CR	2	4 UPPER	305	B	NB	2.47	0.27	13.70	NSPR	0.00	0.00	3
JOHNS CR		1	305	B	NB	2.47	0.38	14.25	NSPR	0.00	0.00	3
MOOSE BUTTE CR		MOUTH	305	C	NB	0.00	0.00	0.00	NSPR	0.95	1.23	3
NEWSOME CR		1	305	C	NB	1.48	2.47	28.21	NSPR	0.00	0.00	2

NEWSOME CR		4MI	305	C	NB	1.98	1.98	28.29 NSPR	0.36	0.82	2
NEWSOME CR		NEW SIDE	305	C	NB	2.10	1.80	27.86 NSPR	0.00	0.00	2
NEWSOME CR		OLD SIDE	305	C	NB	0.86	0.86	12.29 NSPR	0.00	0.00	2
RED R	I	CONTROL 1	305	C	NB	0.00	0.00	0.00 NSPR	0.00	0.00	1
RED R	I	CONTROL 2	305	C	NB	0.00	0.00	0.00 NSPR	0.00	0.00	1
RED R	II	CONTROL 2	305	B	NB	0.11	0.11	1.57 NSPR	0.00	0.00	1
RED R	IV	TREAT 2	305	B	NB	0.23	0.12	2.50 NSPR	0.35	0.80	1
RED R	IV	TREAT 2	305	C	NB	0.00	0.00	0.00 NSPR	1.70	2.21	1
RED R	V	CONTROL 2	305	C	NB	0.17	0.51	6.80 NSPR	4.96	6.44	1
RED R	V	TREAT 2	305	C	NB	0.00	0.08	0.80 NSPR	0.23	0.30	1
RELIEF CR	I	1-A	305	B	NB	6.98	3.76	53.70 NSPR	0.00	0.00	2
RELIEF CR	I	1-B	305	B	NB	3.75	4.88	43.15 NSPR	0.00	0.00	2
RELIEF CR	I	1AB	305	B	NB	7.53	0.94	42.35 NSPR	0.00	0.00	2
RELIEF CR	II	2-A	305	C	NB	2.94	2.52	27.30 NSPR	0.00	0.00	2
RELIEF CR	II	2-B	305	C	NB	3.13	3.48	33.05 NSPR	0.00	0.00	2
TENMILE CR	LOWER	1	305	B	NB	3.17	0.74	19.55 NSPR	0.00	0.00	1
TENMILE CR	UPPER	2	305	B	NB	1.55	1.03	12.90 NSPR	0.00	0.00	1

Selway River

BEAR CR	LOWER	1	301	B	WB	0.24	1.22	7.30 NSPR	0.57	0.74	3
BEAR CR	UPPER	2	301	B	WB	1.34	0.78	10.60 NSPR	1.12	1.45	3
DEEP CR		CACTUS	301	B	WB	3.24	0.50	18.70 NSPR	0.00	0.00	3
DEEP CR		SCIMITAR	301	B	WB	3.91	0.71	23.10 NSPR	0.00	0.00	3
GEDNEY CR	LOWER	1	302	B	WB	2.27	5.08	36.75 NSPR	0.27	0.35	1
GEDNEY CR	LOWER	2	302	B	WB	6.90	5.45	61.75 NSPR	0.00	0.00	1
LITTLE CLEARWATER R		UPPER	301	B	WB	1.91	0.96	0.00 NSPR	0.00	0.00	2
MEADOW CR	LOWER	SLIMSCAMP	302	B	WB	4.14	1.05	86.50 NSPR	0.56	1.27	1
MEADOW CR	UPPER	ABOVE2	302	B	WB	2.24	0.28	42.00 NSPR	0.48	1.09	1
MOOSE CR, E FK	2	302	B	WB	0.32	0.32	3.20 NSPR	0.51	1.16	1	
MOOSE CR, E FK	3	302	B	WB	1.90	1.90	19.00 NSPR	0.17	0.39	1	
MOOSE CR, N FK	4	302	B	WB	0.31	0.93	6.20 NSPR	0.04	0.09	1	
OHARA CR	CANYON	UPPER	302	B	WB	5.97	0.43	32.00 NSPR	0.00	0.00	3
OHARA CR	MEADOW	LOWER	302	B	WB	6.56	2.81	46.85 NSPR	0.00	0.00	3
OTTER CR	#2 TRADI		302	B	WB	0.00	0.00	0.00 NSPR	0.00	0.00	4
RUNNING CR		EAGLEMOUTH	301	B	WB	1.63	1.63	16.30 NSPR	0.18	0.23	1
RUNNING CR		LOWERMOUTH	301	B	WB	0.74	1.04	8.90 NSPR	0.00	0.00	1
RUNNING CR		PACK BR	301	B	WB	0.95	1.59	12.70 NSPR	0.21	0.27	1
RUNNING CR		UPPEREAGLE	301	B	WB	0.57	0.73	6.50 NSPR	0.00	0.00	1
SELWAY R		BEAVER PT	301	C	WB	0.80	0.44	6.20 NSPR	4.05	3.75	3
SELWAY R		HELLSHALF	301	B	WB	2.33	0.72	15.25 NSPR	0.00	0.00	3
SELWAY R		LITTLE-CW	301	B	WB	0.63	0.42	5.25 NSPR	0.94	0.87	3
SELWAY R		MAG-XING	301	B	WB	0.26	0.04	1.50 NSPR	0.04	0.04	3
THREE LINKS CR	TRAD SITE	#1	302	B	WB	8.21	5.47	68.40 NSPR	0.00	0.00	4
WHITE CAP CR	3	LOWER	301	B	WB	3.27	1.19	22.30 NSPR	0.00	0.00	1
WHITE CAP CR	3	MIDDLE	301	B	WB	0.94	0.51	7.25 NSPR	0.07	0.16	1
WHITE CAP CR	3	UPPER	301	B	WB	0.72	0.34	5.30 NSPR	0.00	0.00	1

Lochsa River

BRUSHY FK CR	3	AB PACK CR	303	B	NB	0.00	0.00	0.00 NSPR	0.00	0.00	1
BRUSHY FK CR	3	PACK CR	303	B	NB	1.54	1.02	12.80 NSPR	0.00	0.00	1
BRUSHY FK CR	MOUTH	BRUSHYFKCR	303	B	NB	1.05	1.68	13.65 NSPR	0.00	0.00	1

CROOKED FK CR	3	B BELOW 2B	303	B	NB	1.83	0.42	11.25 NSPR	0.00	0.00	1
CROOKED FK CR	3	LO ROCK CR	303	B	NB	1.01	0.00	5.05 NSPR	0.00	0.00	1
CROOKED FK CR	4	B BELOW 1B	303	B	NB	0.14	0.00	0.70 NSPR	1.09	1.42	1
FIRE CR	LOWER	1	303	B	NB	1.93	0.55	12.40 NSPR	0.00	0.00	1
FIRE CR	UPPER	2	303	B	NB	3.75	2.05	29.00 NSPR	0.00	0.00	1
FISH CR	LOWER	1	303	B	NB	7.56	5.04	63.00 NSPR	0.00	0.00	1
FISH CR	LOWER	1	303	B	NB	3.29	3.20	32.45 NSPR	0.00	0.00	1
FISH CR	UPPER	2	303	B	NB	9.46	3.58	65.20 NSPR	0.00	0.00	1
FISH CR	UPPER	2	303	B	NB	12.92	8.78	108.50 NSPR	0.00	0.00	1
OLD MAN CR		1	303	B	NB	1.82	2.43	21.25 NSPR	0.00	0.00	4
POST OFFICE CR	LOWER	1	303	C	NB	9.24	0.00	46.20 NSPR	0.00	0.00	3
POST OFFICE CR	UPPER	2	303	C	NB	7.81	0.52	41.65 NSPR	0.00	0.00	3
SPLIT CR	LOWER	1	303	B	NB	10.98	3.02	70.00 NSPR	0.00	0.00	1
SPLIT CR	UPPER	2	303	B	NB	7.88	3.31	55.95 NSPR	0.00	0.00	1
WARM SPRINGS CR	LOWER	1	303	B	NB	0.46	0.35	4.05 NSPR	0.00	0.00	3

Appendix A-2.

Evaluation Snorkel Sections - 1995

Appendix A-2. Evaluation section names, channel types (B or C), steelhead trout classification (wild or natural, A or B run), chinook salmon classification (wild or natural, spring or summer), densities and percent carrying capacities for all sites sampled in 1995.

Stream	Strata	Section	Drainage	SALMON RIVER DRAINAGE										Priority Class
				Channel Type	Steelhead Class W vs N A vs B	Steelhead Age 1+ Density no/100msq	Steelhead Age 2+ Density no/100msq	Steelhead Percent Carrying Capacity	Chinook Class W vs N Spr vs Sum	Chinook Age 0+ Density no/100msq	Chinook Percent Carrying Capacity	Chinook Percent Carrying Capacity		
Lower Salmon River														
JOHN DAY CR		LOWER	209	B	WA	14.91	4.07	135.57 WSPR		0.00	0.00			3
JOHN DAY CR		UPPER	209	B	WA	2.08	2.08	29.71 WSPR		0.00	0.00			3
RACE CR		LOWER	209	B	WA	5.10	2.13	0.00 WSPR		0.00	0.00			3
SKOOKUMCHUCK CR		1 (LOWER)	209	B	WA	7.83	1.07	63.57 WSPR		0.00	0.00			3
SLATE CR		1	209	C	NAB	5.54	2.22	38.80 WSPR		2.22	5.05			2
SLATE CR		5	209	B	NAB	2.06	1.44	17.50 WSPR		0.41	0.93			2
Salmon River Canyon														
L+	CROOKED CR	LOWER	207	C	WA	1.97	0.61	0.00 WSPR		0.45	0.00			1
	CROOKED CR	UPPER	207	B	WA	2.77	0.62	0.00 WSPR		1.23	0.00			1
	INDIAN CR	100M<MOUTH	207	B	WA	0.00	0.00	0.00 WSPR		0.00	0.00			3
	JERSEY CR		207	B	WA	1.59	0.00	0.00 WSPR		0.00	0.00			1
	SHEEP CR	300M<MOUTH	207	B	WA	3.57	0.92	0.00 WSPR		0.00	0.00			1
Lemhi River														
BIG SPRINGS CR	1	BSC BRIDGE	204	B	NA	0.38	0.00	1.90 NSPR		0.00	0.00			1
BIG SPRINGS CR	1	BSC5 UPTEL	204	B	NA	1.46	0.21	8.35 NSPR		0.00	0.00			1
BIG SPRINGS CR	1	COW SIGN	204	B	NA	0.65	1.30	9.75 NSPR		0.00	0.00			1
LEMHI R	1	L-59	204		NA	1.38	0.61	9.95 NSPR		1.38	1.28			1
LEMHI R	2	#4 MCKIN A	204		NA	0.00	0.00	0.00 NSPR		0.00	0.00			1
LEMHI R	2	#6	204		NA	0.00	0.90	4.50 NSPR		7.49	6.94			1
LEMHI R	2	#7	204		NA	0.00	0.29	0.00 NSPR		0.29	0.00			1
LEMHI R	2	#9	204		NA	0.00	0.92	4.60 NSPR		0.92	0.85			1
Headwaters Salmon River														
FRENCHMAN CR	2	S2	201	B	NA	0.71	0.00	5.07 NSPR		0.00	0.00			2
FRENCHMAN CR	2	S3	201	B	NA	0.49	0.00	3.50 NSPR		28.53	37.05			2
FRENCHMAN CR	2	S5	201	B	NA	0.00	0.00	0.00 NSPR		0.99	1.29			2

Middle Fork Salmon River

LOON CR	LNM-1	3	205	B	WB	3.54	2.44	29.90	WSUM	0.00	0.00	3
LOON CR	PACK BR	1	205	C	WB	2.31	0.31	13.10	WSUM	0.00	0.00	3
LOON CR	L2-RUN	205	B	WB	0.11	0.23	1.70	WSUM	0.00	0.00	3	
BIG CR	MOUTH	CABIN CR	206	C	WB	0.02	0.02	0.20	WSPR	3.17	7.20	1

Upper Salmon River

SALMON R, N FK	1	DEEPCRPLNG	203	B	NA	5.86	1.67	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	1	HAIRPIN	203	B	NA	0.00	0.00	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	1	MI MKR 340	203	B	NA	7.41	0.78	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	1	TWIN CR CG	203	B	NA	4.99	0.00	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	2	DAHLONEGA	203	B	NA	3.62	0.51	20.65	NSPR	0.00	0.00	1
SALMON R, N FK	2	LW LMBR CO	203	C	NA	0.26	0.00	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	2	MERAL WARD	203	C	NA	0.30	0.00	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	2	PINE MEDWS	203	B	NA	6.42	1.17	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	3	BELW HGHES	203	C	NA	2.84	0.19	0.00	NSPR	0.00	0.00	1
SALMON R, N FK	3	HULL CR RD	203	B	NA	0.00	0.35	0.00	NSPR	0.71	0.00	1
SALMON R, N FK	3	LATHAM HSE	203	B	NA	0.66	0.16	0.00	NSPR	0.16	0.00	1
SALMON R, N FK	3	MI PST 328	203	B	NA	0.00	0.36	0.00	NSPR	0.00	0.00	1

CLEARWATER RIVER DRAINAGE

Stream	Strata	Section	Drainage	Channel Type	Steelhead	Steelhead	Steelhead	Steelhead	Chinook	Chinook	Chinook	Priority Class
					Class W vs N	Age 1+ Density no/100msq	Age 2+ Density no/100msq	Percent Carrying Capacity	Class W vs N	Age 0+ Density no/100msq	Percent Carrying Capacity	

Mainstem Clearwater River

ELDORADO CR	TRANSECT10	306	C	NB	0.00	0.00	0.00	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT12	306	B	NB	2.39	0.00	23.90	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT13	306	C	NB	0.28	0.00	2.80	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT15	306	C	NB	0.00	0.00	0.00	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT2	306	B	NB	1.48	1.06	25.40	NSPR	0.85	1.10	2	2
ELDORADO CR	TRANSECT3	306	B	NB	1.11	0.18	12.90	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT4	306	B	NB	0.24	0.48	7.20	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT5	306	C	NB	0.78	0.26	10.40	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT7	306	C	NB	0.45	0.00	4.50	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT8	306	C	NB	0.00	0.28	2.80	NSPR	0.00	0.00	0.00	2
ELDORADO CR	TRANSECT9	306	C	NB	0.43	0.00	4.30	NSPR	0.00	0.00	0.00	2
LOLO CR	TRANSECT3	306	C	NB	0.19	0.12	2.21	NSPR	0.19	0.00	0.00	1
LOLO CR	TRANSECT4	306	B	NB	0.14	0.28	3.00	NSPR	0.14	0.00	0.00	1
LOLO CR	TRANSECT6	306	C	NB	0.79	0.20	7.07	NSPR	1.28	0.00	0.00	1
LOLO CR	TRANSECT8	306	C	NB	0.32	0.08	2.86	NSPR	0.76	0.00	0.00	1
LOLO CR	TRANSECT9	306	C	NB	0.00	0.00	0.00	NSPR	0.00	0.00	0.00	1

POTLATCH R	L.Boulder	306	B	WA	0.17	0.00	2.83 NSPR	0.00	0.00	1
POTLATCH R, E FK	MIDDLE	306	C	WA	0.00	0.00	0.00 NSPR	0.00	0.00	1
POTLATCH R, E FK	MOUTH	306	B	WA	1.58	0.00	15.80 NSPR	0.00	0.00	1

South Fork Clearwater River

CROOKED R, E FK	H	EF1	305	B	NB	0.14	0.14	0.00 NSPR	0.00	0.00	3
CROOKED R, E FK	H	EF2	305	B	NB	0.62	0.62	6.20 NSPR	0.00	0.00	3
CROOKED R, W FK	H	WF1	305	B	NB	1.55	0.31	9.30 NSPR	0.00	0.00	3
CROOKED R, W FK	H	WF2	305	B	NB	0.00	0.27	1.35 NSPR	0.00	0.00	3
MOORES CR		1 (LOWER)	305	B	NB	0.89	0.00	4.45 NSPR	0.00	0.00	4
MOORES CR		1 (UPPER)	305	C	NB	0.00	3.08	15.40 NSPR	0.00	0.00	4
NEWSOME CR	1	BEAR CR	305	C	NB	2.29	5.49	55.57 NSPR	0.00	0.00	2
NEWSOME CR	1	BEAVER CR	305	C	NB	1.70	2.72	31.57 NSPR	0.00	0.00	2
NEWSOME CR	1	SNGLSCMPG	305	C	NB	1.71	0.85	18.29 NSPR	0.00	0.00	2
NEWSOME CR	1UPPER	SETL POND	305	C	NB	2.36	1.69	28.93 NSPR	4.04	9.18	2
NEWSOME CR	NEW	TRANSECT0	305	C	NB	1.28	0.96	16.00 NSPR	0.00	0.00	2
NEWSOME CR	NEW USFW TRANS 2.5	305	C	NB	0.00	0.81	5.79 NSPR	0.00	0.00	2	

Selway River

LITTLE CLEARWATER R	LOWER	301	B	WB	3.81	0.32	0.00 NSPR	0.00	0.00	2
SELWAY R	BADLUCK CR	301	B	WB	0.03	0.07	0.00 NSPR	0.00	0.00	3
MARTEN CR	1	302	B	WB	2.28	0.33	13.05 NSPR	0.00	0.00	4

Lochsa River

LOCHSA R	@FISH CR	L1	303	B	NB	0.35	0.02	2.64 NSPR	0.00	0.00	3
LOCHSA R	@PAPOOSE L4	303	B	NB	0.05	0.00	0.36 NSPR	0.00	0.00	3	
LOCHSA R	@PETE KING	303	B	NB	0.00	0.00	0.00 NSPR	0.00	0.00	3	
LOCHSA R	SADDLECA	3 (MP 140)	303	B	NB	0.02	0.00	0.14 NSPR	0.00	0.00	3
PETE KING CR	NEW	SLIDE	303	B	NB	9.67	3.76	134.30 NSPR	1.07	2.43	2
PETE KING CR	.5MIUMOUTH	303	B	NB	4.58	1.83	64.10 NSPR	0.00	0.00	2	
PETE KING CR	ABOVEZHOLE	303	B	NB	9.78	2.45	122.30 NSPR	0.00	0.00	2	
PETE KING CR	BIGBOULDER	303	B	NB	8.97	4.48	134.50 NSPR	0.00	0.00	2	
PETE KING CR	CULVERT	303	B	NB	5.43	0.45	58.80 NSPR	0.00	0.00	2	
PETE KING CR	END OF RD	303		NB	7.11	1.78	88.90 NSPR	0.00	0.00	2	
PETE KING CR	FALL	303	B	NB	16.64	9.71	263.50 NSPR	0.00	0.00	2	
PETE KING CR	JUNGLE	303	B	NB	7.63	4.45	120.80 NSPR	0.00	0.00	2	
PETE KING CR	LAST SLIDE	303	B	NB	8.51	1.70	102.10 NSPR	1.13	2.57	2	
PETE KING CR	NUT CREEK	303		NB	13.47	0.48	139.50 NSPR	0.00	0.00	2	

Clear Creek

CLEAR CR	MAINSTEM	1	304	B	NB	7.32	5.99	0.00 NSPR	3.33	0.00	1
----------	----------	---	-----	---	----	------	------	-----------	------	------	---

CLEAR CR	MAINSTEM	2	304	B	NB	16.49	6.99	0.00	NSPR	0.28	0.00	1
CLEAR CR	UPPER	RING RANCH	304	C	NB	2.27	0.00	0.00	NSPR	0.00	0.00	1
CLEAR CR	.5WAGONWHE	304	B	NB	0.00	0.00	0.00	NSPR	0.00	0.00	1	
CLEAR CR	1MILEABOVE	304		NB	0.56	0.84	0.00	NSPR	0.28	0.00	1	
CLEAR CR	440	304		NB	0.00	0.00	0.00	NSPR	0.00	0.00	1	
CLEAR CR	BARNES	304	C	NB	0.63	1.25	0.00	NSPR	0.42	0.00	1	
CLEAR CR	DELIVERANC	304	B	NB	0.00	0.00	0.00	NSPR	0.00	0.00	1	
CLEAR CR	END OF RD	304		NB	4.90	0.77	0.00	NSPR	0.26	0.00	1	
CLEAR CR	F.LOUGHTRAN	304	C	NB	2.48	0.31	0.00	NSPR	0.00	0.00	1	
CLEAR CR	HAZELGREY	304	B	NB	0.30	0.00	0.00	NSPR	0.00	0.00	1	
CLEAR CR	INTAKE	304	C	NB	0.26	0.00	0.00	NSPR	0.00	0.00	1	
CLEAR CR	MCCLEAN	304		NB	3.00	0.82	0.00	NSPR	1.64	0.00	1	
CLEAR CR	OLINCOULEY	304		NB	1.52	0.19	0.00	NSPR	0.00	0.00	1	
CLEAR CR	POWERLINE	304	C	NB	5.56	1.71	0.00	NSPR	0.43	0.00	1	
CLEAR CR	THOMASRNCH	304	C	NB	4.75	2.59	0.00	NSPR	6.92	0.00	1	
CLEAR CR	UBRIDGE#1	304		NB	6.84	3.22	0.00	NSPR	0.80	0.00	1	
CLEAR CR	WAGONWHEEL	304	B	NB	2.12	1.06	0.00	NSPR	0.00	0.00	1	
CLEAR CR	WEIR	304		NB	0.00	0.00	0.00	NSPR	0.00	0.00	1	
CLEAR CR	Y-IN ROAD	304	C	NB	1.70	0.85	0.00	NSPR	2.34	0.00	1	
CLEAR CR, S FK	LOWER	ABVMOUTH	304	B	NB	8.24	6.34	0.00	NSPR	6.34	0.00	1

Appendix A-3.
General Parr Monitoring Sections Unsurveyed in 1995

Appendix A-3. List of stream monitoring sections not completed in 1995 due to prioritization or poor snorkeling conditions.

Stream	Strata	Section	Program	Drainage	Comments	Channel Type	Monitoring or Corridor	Steelhead	Chinook	Chinook	Steelhead	Priority Class
								Class W vs N A vs B	Class W vs N Spr vs Sum	Carrying Capacity Rating	Carrying Capacity Rating	
SNAKE RIVER, above mouth Salmon River												
GRANITE CR	MIDDLE	2	R2	101	NOTDONE IN'95	B	MON	NA	WSPR	12	20	3
Lower Salmon River												
LITTLE SLATE CR	1	TRANSECT7	ISS	209	NOTDONE IN '95	B	OTHR	NA	WSPR	44	20	2
RACE CR		1	R2ISS	209	NOTDONE IN '95	B	OTHR	WA	WSPR	-99	-9	3
SKOOKUMCHUCK CR		2 (UPPER)	R2ISS	209	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	3
SLATE CR		7	ISS	209	NOTDONE IN '95	B	OTHR	NAB	WSPR	44	20	2
WHITEBIRD CR, S FK		2		209	NOTDONE IN '95	MON	WA	WSPR	44	20	1	
Little Salmon River												
BOULDER CR	ABOVE	1	MCCALLISS	210	NOTDONE IN'95	B	MON	NA	NSPR	44	20	3
BOULDER CR	ABOVE	2	MCCALLISS	210	NOTDONE IN'95	B	MON	NA	NSPR	44	20	3
BOULDER CR	BELOW	3	MCCALLISS	210	NOTDONE IN'95	B	MON	NA	NSPR	44	20	3
BOULDER CR	BELOW	5	MCCALLISS	210	NOTDONE IN'95	B	MON	NA	NSPR	44	20	3
HAZARD CR	4	HAZ1	MCCALL	210	NOTDONE IN'95	B	MON	NAB	NSPR	44	20	3
HAZARD CR		HAZ2	MCCALL	210	NOTDONE IN'95	B	MON	NAB	NSPR	44	20	3
RAPID R		CLIFF HANG	MCCALL	210	NOTDONE IN'95	B	OTHR	WA	NSUM	44	20	1
RAPID R		1	MCCALL	210	NOTDONE IN'95	B	OTHR	WA	NSUM	44	20	1
RAPID R		5	MCCALL	210	NOTDONE IN'95	B	OTHR	WA	NSUM	44	20	1
RAPID R	ABV W FK	CORA CLIFF	MCCALL	210	NOTDONE IN'95	B	OTHR	WA	NSUM	44	20	1
RAPID R	CABIN	PARADISE	MCCALL	210	NOTDONE IN'95	B	OTHR	WA	NSUM	44	20	1
RAPID R, W FK	ABV FALLS	US FALLS	MCCALL	210	NOTDONE IN'95	B	EVAL	WA	NSUM	44	20	1
Salmon River Canyon												
CHAMBERLAIN CR	LOWER	ASPENGROVE	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	1
CHAMBERLAIN CR		FORKS	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	1
CHAMBERLAIN CR		HOTZEL	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	1
CHAMBERLAIN CR		MOUTH(L1)	MCCALLISS	207	NOTDONE IN '95	B	MON	WA	WSPR	77	14	1
CHAMBERLAIN CR		RUN(L2)	MCCALLISS	207	NOTDONE IN '95	B	MON	WA	WSPR	77	14	1
CHAMBERLAIN CR		SMOKEHOUSE	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	1
CHAMBERLAIN CR		WFK MOUTH	GPM	207	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	1
CHAMBERLAIN CR		HOTZEL	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	1

CHAMBERLAIN CR	MOUTH	NO NAME	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	77	14	1
CHAMBERLAIN CR	UPPER	HOTZEL	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	77	14	1
CHAMBERLAIN CR, S FK		MOUTH	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	-99	-9	1
CHAMBERLAIN CR, W FK		1ST XING	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK		BEALMEADOW	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK		BEAVERSTMP	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK		MOUTH	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK		OLD PK BR	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK		SAGE FENCE	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK		SPRING	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK		TUMBLE DWN	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	108	14	1
CHAMBERLAIN CR, W FK	STONEBRAKE	AIRSTRIP	GPM	207	NOTDONE IN '95	C	MON	WA	WSPR	108	14	1
FISH CR	I	TRAIL XING	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	108	10	
FLOSSIE CR		TRAIL XING	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	-99	20	
GAME CR	I	TRAIL XING	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	108	20	
HORSE CR	BRIDGE	L2	GPM	207	NOTDONE IN '95	B	MON	WA	WSPR	77	20	3
HORSE CR	UPPER	L1	GPM	207	NOTDONE IN '95	B	MON	WA	WSPR	77	20	3
MOOSE CR		MOUTH	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	44	20	
MOOSE CR		UPPER	PEL	207	NOTDONE IN '95	B	OTHR	WA	WSPR	44	20	
MOOSE CR	LOWER	MOOSE JAW	PEL	207	NOTDONE IN '95	C	OTHR	WA	WSPR	44	20	
RIM CR		MOUTH	PEL	207	NOTDONE IN '95	B	OTHR	WA	NSUM	77	14	4

Lemhi River

L4	BEAR VALLEY CR	HC1	B	GPM	204	NOTDONE IN '95	C	MON	NA	NSPR	77	20	3
	BEAR VALLEY CR	HC1	CAMP	GPM	204	NOTDONE IN '95	B	MON	NA	NSPR	77	20	3
	BIG SPRINGS CR	1	3 UPPER	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	BIG SPRINGS CR	1	3-BSC	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	BIG SPRINGS CR	1	4A UPPER	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	BIG SPRINGS CR	1	BSC 5	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	BIG SPRINGS CR	1	BSC 6 UP	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	BIG SPRINGS CR	1	BSC-1	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	BIG SPRINGS CR	1	MI MRK 93	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	BIG SPRINGS CR	1	TW TELBS 5	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	HAYDEN CR	HC2	B	GPM	204	NOTDONE IN '95	B	MON	NA	NSPR	77	20	1
	HAYDEN CR	HC3	B	GPM	204	NOTDONE IN '95	B	MON	NA	NSPR	77	20	1
	LEMHI R	1	13 BEYELER	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	LEMHI R	1	2B	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	LEMHI R	1	3A	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	LEMHI R	1	BIG SPR CR	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	LEMHI R	1	BS-6	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	LEMHI R	1	DARWIN	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	LEMHI R	1	LEADORE	R7ISS	204	NOTDONE IN '95	C	OTHR	NA	NSPR	108	20	1
	LEMHI R	1	POWER LANE	R7ISS	204	NOTDONE IN '95	C	OTHR	NA	NSPR	108	20	1
	LEMHI R	2	#1 WEIR	R7ISS	204	NOTDONE IN '95	B	OTHR	NA	NSPR	108	20	1
	LEMHI R	2	#10 J L54	R7ISS	204	NOTDONE IN '95	C	OTHR	NA	NSPR	108	20	1
	LEMHI R	2	#2 "MERC"	R7ISS	204	NOTDONE IN '95	C	OTHR	NA	NSPR	108	20	1
	LEMHI R	2	#5 MCKIN B	R7ISS	204	NOTDONE IN '95	C	OTHR	NA	NSPR	108	20	1
	LEMHI R	2	#8 L-50	R7ISS	204	NOTDONE IN '95	C	OTHR	NA	NSPR	108	20	1
	LEMHI R	2	3 SHINER	R7ISS	204	NOTDONE IN '95	C	OTHR	NA	NSPR	108	20	1

Pahsimeroi River

PAHSIMEROI R	1	LWRDWTNLN	ISS	202	NOTDONE IN '95	C	MON	NA	NSUM	77	20	1
PAHSIMEROI R	1	POÝDS	ISS	202	NOTDONE IN '95	C	MON	NA	NSUM	77	20	1
PAHSIMEROI R	1	UPRDWTNLN	ISS	202	NOTDONE IN '95	C	MON	NA	NSUM	77	20	1
PAHSIMEROI R	1	US-P9 DIV	ISS	202	NOTDONE IN '95	C	MON	NA	NSUM	77	20	1

Headwaters Salmon River

BEAVER CR	1	1A	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	2
BEAVER CR	1	1B	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	2
BEAVER CR	1	1C	ISM	201	NEW IN 94	B	MON	NA	NSPR	77	10	2
BEAVER CR	2	2A	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	2
BEAVER CR	2	2B	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	10	2
BEAVER CR	2	2S1	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	10	2
BEAVER CR	2	2S2	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	2
BEAVER CR	2	2S4	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	2
BEAVER CR	2	2S5	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	2
CHAMPION CR	1	1A	ISM	201	NEW IN 93	C	MON	NA	NSPR	44	10	3
CHAMPION CR	1	1B	ISM	201	NEW IN 93	C	MON	NA	NSPR	44	10	3
CHAMPION CR	1	1C	ISM	201	NEW IN 93	B	MON	NA	NSPR	44	10	3
CHAMPION CR	1	1D	ISM	201	NEW IN 93	B	MON	NA	NSPR	44	10	3
CHAMPION CR	2	2A	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	44	10	3
CHAMPION CR	2	2B	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	44	10	3
MORGAN CR	LOWER	FENCE	GPM	201	NOTDONE IN '95	B	MON	NA	NSPR	12	14	3
MORGAN CR	UPPER	BLM CAMP	GPM	201	NOTDONE IN '95	C	MON	NA	NSPR	12	14	3
POLE CR	2	2B/2S4	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	10	3
POLE CR	3	3A/3S4	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	10	3
POLE CR	3	3B/3S4	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	10	3
REDFISH LK CR		LOWER	GPM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	3
REDFISH LK CR	WEIR	DS	GPM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	3
SALMON R	3	3-SCA	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	44	14	1
SALMON R	3	3-SCB	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	44	14	1
SALMON R	3	3A	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	44	14	1
SALMON R	3	3B	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	44	14	1
SALMON R	3	BRB	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	44	14	1
SALMON R	4	4-BRB	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	1
SALMON R	4	4-SCA	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	14	1
SALMON R	4	4-SCB	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	1
SALMON R	4	4A	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	14	1
SALMON R	4	4B	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	14	1
SALMON R	4	BRA	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	14	1
SALMON R	5	5A	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	1
SALMON R	5	5B	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	1
SALMON R	6	6A	ISM	201	NOTDONE IN '95	C	MON	NA	WSPR	77	14	1
SALMON R	6	6B	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	1
SALMON R, E FK	1 ABV WEIR	3	ISS	201	NOTDONE IN '95	B	MON	NAB	NSPR	108	20	1
SALMON R, E FK	2 ABV WEIR	2	ISS	201	NOTDONE IN '95	B	MON	NAB	NSPR	108	20	1

SMILEY CR	1B	1B/S4	SSS	201	NOTDONE IN '95	B	MON	NA	NSPR	77	10	3
SMILEY CR	1B	1BB	SSS	201	NOTDONE IN '95	B	MON	NA	NSPR	77	10	3
SMILEY CR	1B	S3	SSS	201	NOTDONE IN '95	B	EVAL	NA	NSPR	77	10	3
SMILEY CR	2	2A	SSS	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	3
SMILEY CR	2	2S6	ISM	201	NOTDONE IN '95	C	OTHR	NA	NSPR	77	10	3
SMILEY CR	2	S5	ISM	201	NOTDONE IN '95	C	MON	NA	NSPR	77	10	3
WARM SPRINGS CR	LOWER	ABVCAB	R7ISS	201	NOTDONE IN '95	B	MON	NA	NSPR	12	14	3
WARM SPRINGS CR	LOWER	CABINS	GPM	201	NOTDONE IN '95	B	MON	NA	NSPR	12	14	3
WARM SPRINGS CR	UPPER	ABVCAB	GPM	201	NOTDONE IN '95	B	MON	NA	NSPR	12	14	3
WILLIAMS CR	2	2A	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	3
WILLIAMS CR	2	2B	ISM	201	NOTDONE IN '95	B	MON	NA	NSPR	77	14	3

South Fork Salmon River

DOLLAR CR	LOWER	MOUTH	MCCALL	208	NOTDONE IN '95	B	MON	WB	NSUM	44	14	4
DOLLAR CR	UPPER	1	MCCALL	208	NOTDONE IN '95	B	MON	WB	NSUM	44	14	4
JOHNSON CR	ABOVE I	M1	MCCALLISS	208	NOTDONE IN '95	C	MON	WB	NSUM	44	10	1
JOHNSON CR	ABOVE I	M2	MCCALLISS	208	NOTDONE IN '95	C	MON	WB	NSUM	44	10	1
JOHNSON CR	ABOVE I	M2 SIDE	MCCALLISS	208	NOTDONE IN '95	C	MON	WB	NSUM	44	10	1
JOHNSON CR	ABOVE I	M3	MCCALLISS	208	NOTDONE IN '95	C	MON	WB	NSUM	44	10	1
JOHNSON CR	BELOW	PW3B	MCCALL	208	NOTDONE IN '95	B	MON	WB	NSUM	44	10	1
JOHNSON CR	BELOW III	PW3B	MCCALLISS	208	NOTDONE IN '95	B	MON	WB	NSUM	44	10	1
JOHNSON CR	LOWER	L2	MCCALL	208	NOTDONE IN '95	B	MON	WB	NSUM	44	10	1
JOHNSON CR	LOWER	L3	MCCALL	208	NOTDONE IN '95	B	MON	WB	NSUM	44	10	1
JOHNSON CR	LOWER II	PW1A	MCCALLISS	208	NOTDONE IN '95	B	MON	WB	NSUM	44	10	1
JOHNSON CR	MID UPR II	PW3A	MCCALL	208	NOTDONE IN '95	B	MON	WB	NSUM	44	10	1
LICK CR	POOL	MCCALL	208		NOTDONE IN '95	B	MON	WB	WSUM	77	14	2
SALMON R, S FK	11	MCCALL	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	2
SALMON R, S FK	14	MCCALL	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	2
SALMON R, S FK	16	MCCALL	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	2
SALMON R, S FK	18	MCCALLISS	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	2
SALMON R, S FK	19	MCCALLISS	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	2
SALMON R, S FK	20	MCCALLISS	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	2
SALMON R, S FK	22	MCCALLISS	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	2
SALMON R, S FK	5	MCCALLISS	208		NOTDONE IN '95	C	MON	WB	NSUM	44	10	2
SALMON R, S FK	7	MCCALL	208		NOTDONE IN '95	B	MON	WB	NSUM	77	14	2
SALMON R, S FK	POVERTY	MCCALL	208		NOTDONE IN '95	C	MON	WB	NSUM	44	14	2
SALMON R, S FK, E FK	3	MCCALL	208		NOTDONE IN '95	B	MON	WB	NSUM	44	10	1
SALMON R, S FK, E FK	6	MCCALL	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	1
SALMON R, S FK, E FK	7	MCCALL	208		NOTDONE IN '95	B	MON	WB	NSUM	44	14	1
SALMON R, S FK, E FK	BLW JHNSN	MILE 35.8	MCCALL	208	ESTABLISHED '94	B	MON	WB	NSUM	44	14	1

Middle Fork Salmon River

BEARSKIN CR	1A	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	6
BEARSKIN CR	2A	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	6
BEARSKIN CR	3A	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	6
BEARSKIN CR	3B	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	6
BEARSKIN CR	OXBOW	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	6

BEAVER CR		1B	R7ISS	205	NOTDONE IN '95	B	MON	WB	WSPR	77	14	1
BIG CR	LOWER	1		206	NOTDONE IN '95	B	MON	WB	WSUM	44	20	1
BIG CR	MIDDLE	ABV BEAVER	MCCALL	206	ESTABLISHED '94	B	MON	WB	WSUM	44	20	1
BIG CR	MIDDLE	CARPENTER	MCCALLISS	206	NOTDONE IN '95	B	MON	WB	WSUM	44	20	1
BIG CR	MIDDLE	DOE CR	MCCALLISS	206	NOTDONE IN '95	B	MON	WB	WSUM	44	20	1
BIG CR	MIDDLE	HARD BOIL	MCCALLISS	206	NOTDONE IN '95	B	MON	WB	WSUM	44	20	1
BIG CR	MIDDLE	MTH BEAVER	MCCALL	206	ESTABLISHED '94	B	MON	WB	WSUM	44	20	1
BIG CR	MIDDLE	TAYLOR 1		206	NOTDONE IN '95	C	MON	WB	WSUM	44	20	1
CAMAS CR		1	R7ISS	206	NOTDONE IN '95	C	MON	WB	WSPR	77	20	3
CAMAS CR		2	GPM	206	NOTDONE IN '95	C	MON	WB	WSPR	77	20	3
CAMAS CR		CAM1	GPM	206	NOTDONE IN '95	B	MON	WB	WSPR	77	20	3
CAMAS CR		L1-MOUTH	R7	206	NOTDONE IN '95	B	MON	WB	WSPR	77	20	3
CAMAS CR		UPPER	R7	206	NOTDONE IN '95	B	MON	WB	WSPR	77	20	3
ELK CR		1A	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	10	3
ELK CR		1B	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	10	3
ELK CR		2A	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	10	3
ELK CR		2B	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	44	10	3
ELK CR		2C	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	77	14	3
INDIAN CR		LOWER	R7	205	NOTDONE IN '95	B	MON	WB	WSPR	44	20	3
INDIAN CR		UPPER	R7	205	NOTDONE IN '95	B	MON	WB	WSPR	44	20	3
KNAPP CR	1	BIGBEVRDAM	ISS	205	NOTDONE IN '95	C	MON	WB	WSPR	108	14	1
KNAPP CR	1	CAMP SITE	ISS	205	NOTDONE IN '95	C	MON	WB	WSPR	108	14	1
LOON CR		L1-BRIDGE	R7	205	NOTDONE IN '95	B	MON	WB	WSUM	44	20	3
MARBLE CR		LOWER	R7	205	NOTDONE IN '95	B	MON	WB	WSPR	44	14	3
MARBLE CR		MAR1B	MCCALL	205	NOTDONE IN '95	C	MON	WB	WSPR	77	20	3
MARBLE CR	ABOVE	PACKBRIDGE	MCCALL	205	NOTDONE IN '95	B	MON	WB	WSPR	77	20	3
MARBLE CR	ABOVE	UPPER-PKBR	R7	205	NOTDONE IN '95	B	MON	WB	WSPR	44	14	3
MARBLE CR	UPPER	MAR1	MCCALL	205	NOTDONE IN '95	C	MON	WB	WSPR	77	20	3
MARBLE CR	UPPER	MAR2	MCCALL	205	NOTDONE IN '95	B	MON	WB	WSPR	77	20	3
MARBLE CR	UPSTREAM	SUNNYSIDE	MCCALL	205	NOTDONE IN '95	B	MON	WB	WSPR	77	20	3
MONUMENTAL CR	DS LOON CR	MON1	MCCALLISS	206	NOTDONE IN '95	B	MON	WB	WSPR	44	14	2
PISTOL CR		LOWER	R7	205	NOTDONE IN '95	B	MON	WB	WSPR	44	20	3
PISTOL CR		UPPER	R7	205	NOTDONE IN '95	B	MON	WB	WSPR	44	20	3
SALMON R, M FK	I	ROCK IS	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	I	BOUNDARY	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3
SALMON R, M FK	I	GARDEL HOL	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3
SALMON R, M FK	I	INDIAN	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	I	RAPID R	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	77	14	3
SALMON R, M FK	I	SHEEPEATER	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	77	14	3
SALMON R, M FK	II	COUGAR	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	HOSPPL	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	77	10	3
SALMON R, M FK	II	HOSPRUN	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	LWR TAP RN	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	LJACKASS	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	MARBLPL	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	PUNGO	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	SKIJUMP	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	TAPPANPOOL	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	II	WHITEYCX	R7	205	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	III	AIRSTRIP	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	III	FLYING-B	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	44	10	3
SALMON R, M FK	III	SURVEY	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3
SALMON R, M FK	IV	BIG-CR-BR	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3

SALMON R, M FK	IV	GOAT CR PL	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3
SALMON R, M FK	IV	GOAT CR RN	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3
SALMON R, M FK	IV	LOVEBAR	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3
SALMON R, M FK	IV	OTTER BAR	R7	206	NOTDONE IN '95	B	CORR	WB	WSPR	77	20	3
SULPHUR CR	2	3A	R3	205	NOTDONE IN '95	B	MON	WB	WSPR	108	14	1
SULPHUR CR	2	4A	R3	205	NOTDONE IN '95	C	MON	WB	WSPR	108	14	1
SULPHUR CR	2	4B	R3	205	NOTDONE IN '95	B	MON	WB	WSPR	108	14	1

Upper Salmon River

MOYER CR	ABOVE	MO1	GPM	203	NOTDONE IN '95	C	MON	NA	NSPR	77	20	3
MOYER CR	ABOVE	NEW SEC	R7ISS	203	NOTDONE IN '95	B	MON	NA	NSPR	77	20	3
MOYER CR	LOWER	NEW SEC	GPM	203	NOTDONE IN '95	B	MON	NA	NSPR	77	20	3
PINE CR	ABOVE	BRIDGE	R7ISS	203	NOTDONE IN '95	B	MON	NA	NSPR	-99	20	3
PINE CR	ABOVE	SAWMILL CR	R7ISS	203	NOTDONE IN '95	B	MON	NA	NSPR	-99	20	4
SALMON R, N FK		HUGHES	R7ISS	203	NOTDONE IN '95	C	OTHR	NA	NSPR	0	0	4
SALMON R, N FK	1	CRONE GLCH	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	DEEP CR	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	DEEPCRLWR	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	MI MKR 343	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	MI PST 342	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	MI PST 345	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	MI PST 346	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	MI PST 346	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	RYLEK RCH	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	SIGN 93	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	1	UPR L & C	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	BOYNES NF6	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	HUGHES	R7ISS	203	NOTDONE IN '95	C	MON	NA	NSPR	77	14	1
SALMON R, N FK	2	HUGHES RS	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	MI PST 335	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	MI PST 339	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	NF-9-10	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	NF-11	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	NF-7	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	UP GBBONS	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	2	WOLFRAM	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	3	ABNDND TLR	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	3	CUMMINGS	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	3	FLTBED BRG	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
SALMON R, N FK	3	NF BRG LWR	R7ISS	203	NOTDONE IN '95		OTHR	NA	NSPR	0	0	1
THOMPSON CR	ABOVE	TWO-POLE	GPM	201	NOTDONE IN '95	B	MON	NA	NSPR	44	14	3
THOMPSON CR	BELOW	1	GPM	201	NOTDONE IN '95	B	MON	NA	NSPR	44	14	3

CLEARWATER RIVER DRAINAGE

Stream	Strata	Section	Program	Drainage	Comments	CLEARWATER RIVER DRAINAGE		Steelhead Class	Chinook Class	Chinook Carrying Capacity	Steelhead Carrying Capacity	Priority Rating
						Channel Type	Monitoring or Corridor	W vs N	A vs B	Spr vs Sum	Rating	

Mainstem Clearwater River (Includes Middle Fork Clearwater R.)

BEDROCK CR		MOUTH		306	NOTDONE IN '95		EVAL	WA	NSPR	0	0	4
BIG CANYON CR		DIRT PILE	R2ISS	306	NOTDONE IN '95	B	MON	WA	NSPR	-99	14	1
POTLATCH R	KENDRICK	KENDRICK	R2ISS	306	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	6	1
POTLATCH R, E FK		UP CORRALS		306	NOTDONE IN '95		EVAL	WA	NSPR	-99	10	1

South Fork Clearwater River

CLEARWATER R, S FK		JOHNS CR	R2ISS	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	-9	3
CLEARWATER R, S FK		MP 13	RSISS	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	-9	3
CLEARWATER R, S FK		MP 14, UP	R2ISS	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	-9	3
CLEARWATER R, S FK		MP 18	R2ISS	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	-9	3
CLEARWATER R, S FK		NEWSOME	R2ISS	305	NOTDONE IN '95	C	MON	NB	NSPR	-99	-9	3
CLEARWATER R, S FK		TENMILE CR	R2ISS	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	-9	3
CLEARWATER R, S FK		WING CREEK	R2ISS	305	NOTDONE IN '95	B	MON	NB	NSPR	-99	-9	3
CLEARWATER R, S FK	MEADOW CR	MP 17	R2ISS	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	-9	3
CROOKED R		CONTROLX	ISM	305	NOTDONE IN '95	B	MON	NB	NSPR	44	14	1
FIVE MILE CR		IA	ISM	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	14	4
FIVE MILE CR		IB	ISM	305	NOTDONE IN '95	B	OTHR	NB	NSPR	-99	14	4
MEADOW CR	CANYON	MP2	R2ISS	305	NOTDONE IN '95	B	MON	NB	NSPR	44	14	2
MEADOW CR	MEADOW	GRAZED	R2ISS	305	NOTDONE IN '95	C	MON	NB	NSPR	44	14	2

52

Selway River

MOOSE CR	LOWER	1	R2	302	NOTDONE IN '95	B	MON	WB	NSPR	44	20	3
MOOSE CR, E FK		1	R2	302	NOTDONE IN '95	B	MON	WB	NSPR	44	20	3
MOOSE CR, N FK		5	R2	302	NOTDONE IN '95	B	MON	WB	NSPR	44	20	3

Lochsa River

COLT CR		BRIDGE	ISS	303	NOTDONE IN '95	B	MON	NB	NSPR	44	20	3
CROOKED FK CR	1	ABOVE 2A	ISS	303	COULD NOT FIND	B	MON	NB	NSPR	77	20	1
CROOKED FK CR	2	ABOVE 3A	ISS	303	NOTDONE IN '95	B	MON	NB	NSPR	77	20	1
CROOKED FK CR	2	ABOVE 4A	ISS	303	NOTDONE IN '95	B	MON	NB	NSPR	77	20	1
CROOKED FK CR	3	GPM13		303	NOTDONE IN '95					0	0	1
CROOKED FK CR	3	UP ROCK CR	ISS	303	NOTDONE IN '95	B	MON	NB	NSPR	77	20	1
HOPEFUL CR	1	1-BOOGIEDN	ISS	303	NOTDONE IN '95	B	MON	NB	NSPR	77	20	3
WHITE SAND CR	LOWER	WS1	ISS	303	NOTDONE IN '95	B	MON	NB	NSPR	44	20	1

Appendix B.
Prioritization of Snorkel Streams

Appendix B. Prioritization of General Parr Monitoring snorkel streams.

SNAKE RIVER AND TRIBUTARIES

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Sheep Cr.	101	Y	Y	NPT/R2	R2	1
Capt. John Cr.	101	N	Y	R2	--	1
Granite Cr.	101	N	Y	R2	--	3

LOWER CLEARWATER

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Lolo Cr.	306	Y	Y	NPT	R2	1
Lapwai Cr. or	306	N	Y	NPT	R2	1
Big Canyon Cr.	306	N	Y	R2	--	1
Potlatch R. & Efk	306	N	Y	R2	--	1\2
Mission Cr.	306	N	Y	R2	--	1
Eldorado Cr.	306	Y	Y	NPT	--	2
Bedrock Cr.	306	Y	R2	RES	4	

SOUTH FORK CLEARWATER

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Red R., and SF Red R.	305	Y	Y	R2	--	1
Crooked R., & EF & WF	305	Y	Y	RES	--	1
Tenmile Cr.	305	Y	Y	R2	--	1
American R.	305	Y	Y	R2	--	2
Newsome Cr.	305	Y	Y	NPT	R2	2
Meadow Cr.	305	Y	Y	NPT	R2	2/3
Mill Cr.	305	Y	Y	NPT	--	2
SFClearwater	305	Y	Y	R2	--	3
Johns Cr.	305	N	Y	R2	--	3
Moores Cr.	305	N	Y	R2	--	4
Gospel Cr.	305	N	Y	R2	--	4
Twin Lakes Cr.	305	None	None	R2	--	4
Moose Butte Cr.	305		Y	R2	--	3
Relief Cr.	305		Y	RES	--	2
Five Mile Cr.	305		Y	RES	--	4

Appendix B. Continued

MIDDLE FORK CLEARWATER

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Clear Cr. & SF Clear Cr.	304	Y	Y	FRO	R2	1

LOCHSA

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Crooked Fork Cr. & Brushy Fork Cr.	303	Y	Y	RES	--	1
White Sand Cr. & Big Flat Cr.	303	Y	Y	RES	--	1
Fish Cr.	303	N	Y	RES	--	1
Fire Cr.	303	N	Y	R2	--	1
Split Cr.	303	N	Y	R2	--	1
Pete King Cr.	303	Y	Y	FRO	--	2
Squaw Cr.	303	Y	Y	NPT	--	2
Papoose Cr.	303	Y	Y	NPT	--	2
Post Office Cr.	303	Y	Y	R2	--	3
Warm Springs Cr.	303	Y	Y	R2	--	3
Mainstem	303	Y	Y	R2	--	3
Old Man Cr.	303	N	Y	R2	--	4
Colt Cr.	303		Y	R2	--	3
Hopeful Cr.	303		Y	R2	--	3

SELWAY

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
White Cap Cr.	301	Y	Y	R2	--	1
Running Cr.	301	Y	Y	RES	--	1
Meadow Cr.	302	Y	Y	NPT	R2	1
Gedney Cr.	302	N	Y	RES	--	1
Bear Cr.	301	Y	Y	R2	--	3
Deep Cr.	301	Y	Y	R2	--	3
Moose Cr. & EF & NF	302	Y	Y	R2	--	3
O'Hare Cr.	302	Y	Y	R2	--	3

Appendix B. Continued.

SELWAY (Cont.)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Mainstem	301	Y	Y	R2	--	3
Otter Cr.	302	Y	Y	R2	--	4
Three Links Cr.	302	Y	Y	R2	--	4
Marten Cr.	302	Y	Y	R2	--	4
L.Clearwater R.	301	Y	Y	R2	--	2

LOWER SALMON (mouth to French Cr.)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Whitebird Cr. & SF	209	Y	Y	R2	--	1
Slate Cr. & Little Slate	209	Y	Y	NPT	--	2
John Day Cr.	209	Y	Y	R2	--	3
Skookumchuck Cr.	209	Y	Y	R2	--	3
Race Cr.	209	Y	Y	R2	--	3

LITTLE SALMON

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Rapid R. & WF	210	Y	Y	R3	--	1
Boulder Cr.	210	Y	Y	R3	--	3
Mainstem	210	Y	Y	R3	--	3
Hazard Cr.	210	Y	Y	R3	--	3

SALMON RIVER CANYON (French Cr. - Middle Fk)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Chamberlain Cr. & WF & SF	207	Y	Y	RES	--	1
Bargamin Cr.	207	Y	Y	R3	R2	3
Horse Cr.	207	Y	Y	R7	--	3
Sheep Cr.	207	Y	Y	R3	R2	1

Appendix B. Continued.

SALMON RIVER CANYON (French Cr. - Middle Fk) (Cont.)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	<u>(1-4)</u>
Rim Cr.	207	NONE	NONE	?	--	4
Crooked Cr.	207	Y	Y	R2	--	1
Jersey Cr.	207	Y	Y	R2	--	1
Fish Cr.	207			RES	--	
Flossie Cr.	207			R7	--	3
Indian Cr.	207			R7	--	
Game Cr.	207					
Moose Cr.	207					

SOUTH FORK SALMON

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	<u>(1-4)</u>
Johnson Cr.	208	Y	Y	R3	--	1
Secesh R.	208	Y	Y	NPT	R3	1
EFSF Salmon	208	Y	Y	R3	--	1
Mainstem	208	Y	?	R3	--	1
Mainstem upper	208	Y	Y	SBT	R3	2
Lick Cr.	208	Y	Y	?	R3	2
Buckhorn Cr.	208	Y	Y	R3	--	3
Lake Cr.	208	Y	Y	R3	NPT	1
Rock Cr.	208	Y	Y	R3	RES	1
Sand Cr.	208	Y	Y	R3	--	1
Dollar Cr.	208	Y	Y	R3	--	4

MIDDLE FORK SALMON

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	<u>(1-4)</u>
Marsh Cr.*	205	Y	Y	RES	--	1
Sulphur Cr.	205	Y	Y	RES	R3	1
Big Cr.	206	Y	Y	R3	--	1
Bear Valley Cr.	205	Y	Y	SBT	RES	2
Monumental Cr. & WF	206	Y	Y	?	R3?	2
Camas Cr.	206	Y	Y	R7	--	3

Appendix B. Continued.

MIDDLE FORK SALMON (Cont.)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Elk Cr.	205	Y	Y	RES?	R3?	3
Indian Cr.	205	Y	Y	R7	--	3
Loon Cr.	205	Y	Y	R7	--	3
Marble Cr.	205	Y	Y	R7/R3	--	3
Pistol Cr.	205	Y	Y	R7	--	3
Mainstem	205	Y	Y	R7	--	3
Bearskin Cr.	205			R3	--	

(*includes snorkel transects on Beaver, Capehorn and Knapp Creeks)

LEMHI

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Mainstem above	204	Y	Y	?	--	1
Hayden Cr.	204	Y	Y	R7	--	1/3?
Bear Valley Cr.	204	Y	Y	R7	--	3
Big Springs Cr.	204	Y	Y	R7	--	1

PAHSIMEROI

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Mainstem	202	Y	Y	RES	--	1

UPPER SALMON (Middle Fork - Sawtooth Weir)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
North Fork	203	Y	Y	R7	--	1
Valley Cr.	201	Y	Y	SBT	R7	1
Yankee Fork, WF	201	Y	Y	SBT	R7	2
Basin Cr.	201	N	Y	RES	--	2
Morgan Cr.	201	Y	Y	R7	--	3
Moyer Cr.	203	Y	Y	R7	--	3
Panther Cr.	203	Y	Y	R7	--	3

Appendix B. Continued.

UPPER SALMON (Middle Fork - Sawtooth Weir) (Cont.)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Mainstem	201	Y	Y	R7	--	3
Thompson Cr.	201	Y	Y	R7	--	3
Warm Springs Cr.	201	Y	Y	R7	--	3
Redfish Lake Cr.	201	Y	Y	R7	--	3
Pine Cr.	203	N	Y	R7?	--	4

EAST FORK SALMON

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Herd Cr.	201	Y	Y	SBT	R7	1
Mainstem	201	Y	Y	SBT	R7	1
Germania Cr.	201	N	Y	RES	--	2
West Pass Cr.	201	N	Y	RES	--	2

HEADWATERS SALMON (above Sawtooth Weir)

<u>Stream</u>	<u>Drain</u>	(Y/N) <u>Chinook</u>	(Y/N) <u>Steelhead</u>	Agency 1	Priority 2	Priority (1-4)
Alturas Lake Cr.	201	Y	Y	R7	--	1
Mainstem	201	Y	Y	RES	--	1
Beaver Cr.	201	Y	Y	RES	--	2
Frenchman Cr.	201	Y	Y	RES	--	2
Champion Cr.	201	Y	Y	RES	--	3
Fourth of July	201	Y	Y	RES	--	3
Gold Cr.	201	Y	Y	RES	--	3
Huckleberry Cr.	201	Y	Y	RES	--	3
Pettit Lake Cr.	201	Y	Y	RES	--	3
Pole Cr.	201	Y	Y	RES	--	3
Smiley Cr.	201	Y	Y	RES	--	3
Williams Cr.	201	Y	Y	RES	--	3
Yellowbelly Cr.	201	Y	Y	RES	--	3

Appendix B. Continued.

Abbreviations:

-
- R2 - IDFG Region 2 (Lewiston, ID)
 - R3 - IDFG Region 3 (McCall, ID)
 - R7 - IDFG Region 7 (Salmon, ID)
 - RES - IDFG Fisheries Research (Nampa, ID)
 - FRO - USFWS Fishery Resource Office (Ahsahka, ID)
 - NPT - Nez Perce Tribe (Ahsahka, ID)
 - SBT - Shoshone-Bannock Tribes (Fort Hall, ID)

Appendix C-1.

**Biological Data Collection Sheet for
General Parr Monitoring - 1995**

SNORKEL DATA SHEET

STREAM _____	DATE _____	LEADER/RECORDER _____						
AGENCY: (circle one)	NPT SBT IFG FRO ICU							
PROGRAM: (circle one)	R2 R3 R7 GPM PEL ISM CSUP SSUP							
STRATA _____	SECTION _____							
CHANNEL TYPE: B C OTHER	SECTION TYPE		MONR CSUP SSUP EVAL					
QUAD MAP _____	UTM X/Y _____							
IDAEPa REACH # _____								
LENGTH _____	TRANSECT WIDTHS _____							
H ₂ O TEMP _____	TIME _____	MEAN WIDTH _____	SEC AREA _____					
VISIBILITY _____								
METHODS:	() Snorkel (circle <u>corridor</u> or <u>entire stream width</u>)							
	() Electrofish							
	() Other _____							
HABITAT TYPE: (circle one)		Pool Ripple Run Pocket Water						
Length Class (in)	RAINBOW - STEELHEAD				RESIDENT SPECIES			
	Total	Wild & Natural	Adipose Clipped	Hatchery Catchable	Cutthroat	Brook	Bull	Whitefish
<2								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
>12 specify length								
Age 0 Chinook				Adults				
Age 1 Chinook				Redds				

Appendix C-2.

**Biological Data Collection Sheet by Habitat
Unit used by Intensive Smolt Sampling (ISS) Programs**

ISS -- Snorkel Count Data

Date _____ Time _____ Recorder/Crew _____
 Stream _____ Strata _____ Site _____
 Agency: (Circle one) NPT, SBT, IFG, FRO, ICU Program: _____
 Section (Site) Type: MONR, CSUP, SSUP, EVAL IDAEPA Reach # _____
 H₂O Temp _____ Visibility _____ Channel Type: B, C, OTHER _____
 Sample Methods: Snorkel, Electrofishing, Other _____ Conductivity _____

Unit # _____ Habitat Type: (circle one) Pool Riffle Run Pocket Glide
 Transect Length _____ Widths _____ Avg Width _____ S. Area _____

LENGTH	STHD	RESIDENT	LENGTH	STHD	RESIDENT
< 2			8		
2			9		
3			10		
4			11		
5			12		
6			> 12 SPECIFY		
7					
CHINOOK 0			CHINOOK 1		

Unit # _____ Habitat Type: (circle one) Pool Riffle Run Pocket Glide
 Transect Length _____ Widths _____ Avg Width _____ S. Area _____

LENGTH	STHD	RESIDENT	LENGTH	STHD	RESIDENT
< 2			8		
2			9		
3			10		
4			11		
5			12		
6			> 12 SPECIFY		
7					
CHINOOK 0			CHINOOK 1		

Unit # _____ Habitat Type: (circle one) Pool Riffle Run Pocket Glide
 Transect Length _____ Widths _____ Avg Width _____ S. Area _____

LENGTH	STHD	RESIDENT	LENGTH	STHD	RESIDENT
< 2			8		
2			9		
3			10		
4			11		
5			12		
6			> 12 SPECIFY		
7					
CHINOOK 0			CHINOOK 1		

Chinook age 0 - Z; yearlings - Y Piv - F Steelhead - S; adipose clipped - AD; Hatchery catchables - H
 Cutthroat - CT Bull Trout - DV Brook trout - BK Whitefish - WF; age 0 - WFF Squawfish - SG

Appendix C-3

**Physical Habitat Data Collection Sheet for
General Parr Monitoring**

EPA REACH _____ LENGTH _____ COMMENTS _____

STRATA _____ VERTICAL DROP _____

SECTION _____ GRADIENT % _____

CHANNEL TYPES: B - confined, flushing
C - meandered, depositional

HABITAT TYPE: (Circle One) pool, riffle, run, pocket water

Transect Length from Bottom	Width	Location on transect (1 to r)	Depth	Substrate Class by Area				
				Sand	Gravel	Rubble	Boulder	Bedrock
		1/4	_____	_____	_____	_____	_____	_____
		1/2	_____	_____	_____	_____	_____	_____
		3/4	_____	_____	_____	_____	_____	_____
		1/4	_____	_____	_____	_____	_____	_____
		1/2	_____	_____	_____	_____	_____	_____
		3/4	_____	_____	_____	_____	_____	_____
		1/4	_____	_____	_____	_____	_____	_____
		1/2	_____	_____	_____	_____	_____	_____
		3/4	_____	_____	_____	_____	_____	_____
		1/4	_____	_____	_____	_____	_____	_____
		1/2	_____	_____	_____	_____	_____	_____
		3/4	_____	_____	_____	_____	_____	_____

Appendix D.

**General Parr Monitoring database structure
(version 1.1)**

Appendix D
GENERAL PARR MONITORING
DATABASE STRUCTURE
 (version 1.1)

FIELD	FIELD NAME	TYPE	WIDTH	DEC
1	STREAM	Character	20	
2	STRATA	Character	10	
3	SECTION	Character	10	
4	HABITAT	Character	2	
5	TOTALTRAN	Logical	1	
6	DATE	Character	8	
7	YR	Character	2	
8	COLLECTOR	Character	12	
9	AGENCY	Character	7	
10	PROGRAM	Character	10	
11	CDT	Numeric	3	
12	WEATHER	Character	10	
13	IDAEPA	Character	10	
14	COMMENTS	Character	15	
15	TEMP	Numeric	4	1
16	TIME	Numeric	4	
17	LNTH	Numeric	6	2
18	MNWDTH	Numeric	6	2
19	SEC_AREA	Numeric	8	2
20	VIS	Numeric	5	2
21	MTHD	Character	4	
22	CHTYP	Character	1	
23	MON	Character	4	
24	WNAB	Character	3	
25	CHCLS	Character	4	
26	STCELL	Numeric	2	
27	NEWSTCELL	Numeric	2	
28	CHCELL	Numeric	2	
29	NEWCHCELL	Numeric	2	
30	CHINOD	Numeric	6	2
31	CHIN1D	Numeric	6	2
32	STHDOD	Numeric	5	2
33	STHD1D	Numeric	5	2
34	STGD2D	Numeric	5	2
35	STHD12D	Numeric	5	2
36	CHCC	Numeric	3	
37	CHPERCC	Numeric	6	2
38	STCC	Numeric	2	
39	STPERCC	Numeric	6	2
40	STHD02	Numeric	4	
41	STHD35	Numeric	4	
42	STHD68	Numeric	4	
43	STHD911	Numeric	4	
44	STHD1214	Numeric	4	
45	STHD1517	Numeric	4	
46	STHD18PL	Numeric	4	
47	STAC02	Numeric	4	
48	STAC35	Numeric	4	

Appendix D. Continued

49	STAC68	Numeric	4	
50	STAC911	Numeric	4	
51	STAC1214	Numeric	4	
52	STAC1517	Numeric	4	
53	STAC18PL	Numeric	4	
54	RBT02	Numeric	4	
55	RBT35	Numeric	4	
56	RBT68	Numeric	4	
57	RBT911	Numeric	4	
58	RBT1214	Numeric	4	
59	RBT1517	Numeric	4	
60	RBT18PL	Numeric	4	
61	CUTT02	Numeric	4	
62	CUTT35	Numeric	4	
63	CUTT68	Numeric	4	
64	CUTT911	Numeric	4	
65	CUTT1214	Numeric	4	
66	CUTT1517	Numeric	4	
67	CUTT18PL	Numeric	4	
68	BRKT02	Numeric	4	
69	BRKT35	Numeric	4	
70	BRKT68	Numeric	4	
71	BRKT911	Numeric	4	
72	BRKT1214	Numeric	4	
73	BRKT1517	Numeric	4	
74	BRKT18PL	Numeric	4	
75	BULT02	Numeric	4	
76	BULT35	Numeric	4	
77	BULT68	Numeric	4	
78	BULT911	Numeric	4	
79	BULT1214	Numeric	4	
80	BULT1517	Numeric	4	
81	BULT18PL	Numeric	4	
82	WHF02	Numeric	4	
83	WHF35	Numeric	4	
84	WHF68	Numeric	4	
85	WHF911	Numeric	4	
86	WHF1214	Numeric	4	
87	WHF1517	Numeric	4	
88	WHF18PL	Numeric	4	
89	CHINO	Numeric	4	
90	CHIN1	Numeric	4	
91	SPCHPERUSE	Numeric	4	2
92	SUCHPERUSE	Numeric	4	2
93	STHDPERUSE	Numeric	4	2
94	SPCHNHA	Numeric	1	
95	SUCHNHA	Numeric	1	
96	STHDHA	Numeric	1	
97	SPCHUSETYP	Numeric	1	
98	SUCHUSETYP	Numeric	1	
99	STHDUSETYP	Numeric	1	
Total			449	

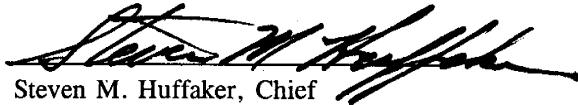
Submitted by:

J.A. Hall-Griswold
Fisheries Research Biologist

C.E. Petrosky
Fisheries Staff Biologist

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME



Steven M. Huffaker, Chief
Bureau of Fisheries



Al Van Vooren
Fisheries Research Manager